# MODERN HOUSING IN TOWN & COUNTRY

JAMES CORNES

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# MODERN HOUSING

IN

# TOWN AND COUNTRY

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ILLUSTRATED BY

EXAMPLES OF MUNICIPAL AND OTHER SCHEMES OF BLOCK DWELLINGS, TENEMENT HOUSES, MODEL COTTAGES AND VILLAGES

ALSO PLANS AND DESCRIPTIONS OF THE CHEAP COTTAGE EXHIBITION

BY

JAMES CORNES

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# PREFACE.

WITHIN the last few years the question of the housing of the working classes has forced itself upon the attention of many municipalities. In London the question is one of specially pressing importance. Here are met in most striking form all the evils that arise out of overcrowding and the demand for land for purely business purposes. It has therefore become necessary that these municipalities shall see that suitable houses are available for the people; and many Councils, among them the London County Council, have to some extent been compelled to provide dwellings, thus showing how insistent the problem has now become. Moreover, many large landowners, and great employers of labour, have recently had to give serious attention to the housing of their employees.

The importance which this question has assumed may be gauged from the fact that even the selected schemes dealt with in this volume represent an outlay of over a million sterling, whilst the whole of the schemes actually carried out by the bodies mentioned represent no less a sum than ten millions sterling. The question, however, is not merely one of building houses, but also of what type of house shall be built. The planning of a workman's cottage is of paramount importance to the health and well-being of the community as a whole; and this, one is glad to think, is now being recognised. Architects of first-rate ability are devoting as much thought to the planning of the cottage as the mansion. Municipal and private owners alike have made many experiments and considered many schemes in their search for the best results.

For years the Housing of the Working Classes has engaged my attention, and I have found that, the greater the knowledge acquired, the more interesting and fascinating the study becomes. While an elaborate treatise on the subject is not intended, my great desire, apart from the commercial side of the question, is to impart such knowledge as will meet the requirements of the time, and to assist in the provision of healthy and comfortable homes for the people, in the realisation of which I shall receive compensation really greater than monetary worth. I have myself built a colony of "model dwellings" in the town of Leek, which, I believe, practically demonstrates that houses of a moderate rental, yet artistic in appearance, and answering all hygienic requirements, can be built so as to return a fair rate of interest. Many experienced students of the question hold that three is the minimum number of bedrooms for an English family, and that a bath, fitted with hot and cold water supply, is an absolute necessity in every home. My cottages embrace both these features, and I have reason to know that the introduction of a bath with its application under novel conditions has met with acceptance among those interested in such problems, and it is gratifying to find that, in some towns, no charge is made by the water authorities in respect of water used for such purposes, and that in many others the charge has been considerably reduced, so as to encourage cleanliness.

The fact that houses can be built so as to be self-supporting carries its own recommendation with it. My experience as a town councillor has at least taught me that municipal undertakings must be practicable, and that no housing scheme is likely to meet with favour if it entails a loss to the municipality.

This book embodies the result of that study and practical experience, and is published in response to requests from many who are themselves engaged in attempting the solution of the problem. It will be found to contain an account of a selected number of schemes in actual working, and the selection is, I believe, a representative one. Full details are given in each case, together with plans and illustrations. It is hoped that the book will be of use to all those engaged in the construction of workmen's dwellings, including, as it does, particulars of Block Dwellings, Tenements, Peabody Buildings, Rowton Houses, and Cottages.

It will be remembered that a Royal Commission was appointed in the year 1884 to inquire generally into the "Housing of the Working Classes." His Majesty King Edward VII. (then

Prince of Wales) was a member of that Commission. Since that time his sympathetic interest in the subject has remained unabated, and, on several occasions, His Majesty has crowned the undertakings of the London County Council, by giving his royal countenance to their efforts.

The Millbank Dwellings, which form the first illustration in this work, were visited by the King and Queen on February 18th, 1903. The Prince and Princess of Wales have also shown their interest in the subject by visiting the Westminster and Chelsea Dwellings; the Duchess of Teck laid the foundation-stone of the Marylebone Dwellings last year, and Her Royal Highness Princess Christian of Schleswig-Holstein laid the foundation-stone of a Rowton House in Birmingham, in June, 1903; all of which proves the interest taken by royalty in the people, whose well-being they have so much at heart.

The Cheap Cottage Exhibition, to be held at the Garden City in July next, is being looked forward to with keen interest, and will, no doubt, do much to help in the solution of this problem, especially in the matter of rural housing. The plans and particulars of cottages which are being erected there for less than £150 each are very interesting. Whilst possessing every modern convenience, cottages, planned and arranged to comply with the bye-laws, can be built on free sites to let at 3*s*. 6*d*. a week and to yield 5 per cent. on the outlay.

In collecting material and information for this work, the writer has been delighted to find housing schemes carried out by many emulators of the late George Peabody, and the late Lord Rowton, whose names are memorable in the history of England. The late Mr. Sutton was probably very largely influenced by the munificence of these gentlemen in his princely gift of nearly two millions. His trustees will have the opportunity of adding, to a colossal extent, to what has already been accomplished.

In conclusion, I should like to take this opportunity of offering my sincere thanks for the recognition that my own efforts in connection with the subject have received in various standard books, in the Press, and by engineers, architects, and many others. I am specially indebted to many municipal councils and their officials, to architects and other gentlemen, for their ready co-operation and assistance.

JAMES CORNES.

Norton House, Leek, Staffs.;
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# CONTENTS.


| | PAGE |
|---|---|
| LONDON COUNTY COUNCIL | 3 |
| THE PEABODY TRUST | 9 |
| CITY OF WESTMINSTER | 13 |
| MARYLEBONE BOROUGH COUNCIL | 17 |
| METROPOLITAN BOROUGH OF CHELSEA | 21 |
| METROPOLITAN BOROUGH OF BERMONDSEY | 25 |
| ROWTON HOUSES, LIMITED | 29 |
| ROWTON HOUSE, BIRMINGHAM | 37 |
| THE COLMORE ESTATE, HOSPITAL STREET, BIRMINGHAM | 41 |
| CITY OF LIVERPOOL | 43 |
| BATTERSEA BOROUGH COUNCIL | 47 |
| BOROUGH OF CAMBERWELL | 53 |
| SOUTHAMPTON CORPORATION | 55 |
| BOROUGH OF SALFORD | 61 |
| THE GARDEN CITY, LETCHWORTH | 63 |
| BOURNVILLE VILLAGE | 71 |
| PORT SUNLIGHT | 77 |
| GARDEN VILLAGE TRUST AT EARSWICK, WEST HUNTINGTON | 81 |
| HORNSEY CORPORATION | 83 |
| COUNTY BOROUGH OF CROYDON | 89 |
| THE ARTIZANS', LABOURERS' AND GENERAL DWELLINGS COMPANY, LIMITED | 91 |
| LONDON AND SOUTH-WESTERN RAILWAY COMPANY, EASTLEIGH ESTATE | 97 |
| CITY OF BRADFORD | 99 |
| CITY OF MANCHESTER | 101 |
| CITY OF NEWCASTLE-ON-TYNE | 105 |
| COTTAGES, NORTHFIELD | 108 |
| COTTAGES, RIPLEY | 109 |
| MODEL DWELLINGS AT NELSON | 110 |
| MODEL COTTAGES, SUTTON, SURREY | 111 |
| MODEL ARTIZANS' DWELLINGS, COUNTY BOROUGH OF HANLEY | 111 |
| THE SMALL HOLDINGS ASSOCIATION, NEWDIGATE COTTAGE | 112 |
| COUNTY BOROUGH OF ROTHERHAM | 112 |
| COTTAGES AT HEATON, NEWCASTLE-ON-TYNE | 113 |
| LEEK MODEL DWELLINGS | 119 |
| THE CHEAP COTTAGES EXHIBITION | 123 |

# LIST OF ARCHITECTS, ENGINEERS AND SURVEYORS WHOSE BUILDINGS ARE ILLUSTRATED.


| | | PAGE |
|---|---|---|
| Agate, C. Gustave | Cheap Cottages Exhibition | 191 |
| Allen, W. T. | ,, ,, ,, | 134 |
| Ashbee, C. R. | ,, ,, ,, | 186 |
| Baker and May | ,, ,, ,, | 164 |
| Barrett (Stanley) and Driver | ,, ,, ,, | 158, 159 |
| Bennett and Bidwell | ,, ,, ,, | 138 |
| Blow, Detmar J. | ,, ,, ,, | 188 |
| Brealey, J. T. | Leek Model Dwellings | 119 |
| Brocklesby, J. S. | Borough of Bermondsey | 25 |
| Campbell, W. | Model Dwellings, Hanley | 111, 115 |
| Carter, Geo. F. | Borough of Croydon | 88 |
| Cayley, H. | Cheap Cottages Exhibition | 178 |
| Clare, George E. | ,, ,, ,, | 130 |
| Clough, H.A. | ,, ,, ,, | 130 |
| Cole, J. Kingwell | ,, ,, ,, | 150 |
| Co-Partnership Tenants' Housing Council | ,, ,, ,, | 138 |
| Corbett, J. | Borough of Salford | 60 |
| Crane, Lionel F. | Cheap Cottages Exhibition | 142 |
| Crickmer, C. M. | ,, ,, ,, | 186 |
| Dunkerley, V. | First Garden City | 63 |
| ,, ,, | Cheap Cottages Exhibition | 127, 140, 154, 162, 192, 194 |
| Earle, G. J. | Rowton Houses, Limited | 29 |
| ,, ,, | Noel Park Estate | 91 |
| Edwards, F. E. P. | City of Bradford | 99 |
| Field, Horace | Ripley Cottages | 109 |
| Foxley, Allen | Cheap Cottages Exhibition | 146 |
| Fraser, Gilbert | ,, ,, ,, | 132 |
| Green, W. Curtis | ,, ,, ,, | 172 |
| Gimson, Ernest | ,, ,, ,, | 188 |
| Hair, Charles J. | Southampton Corporation | 55 |
| Harrison, Arthur | Colmore Estate, Birmingham | 40 |
| Harrison and Hattrell | Cheap Cottages Exhibition | 152 |
| Harvey, W. Alex. | Bournville Garden Village | 71 |
| Hayward, T. W. A. | Battersea Borough Council | 47 |
| Henman and Cooper | Cheap Cottages Exhibition | 190 |
| Hesketh and Stokes | ,, ,, ,, | 184 |
| Houfton, Percy B. | ,, ,, ,, | 174 |
| Huxtable, J. | ,, ,, ,, | 182 |
| Johnston, R. | ,, ,, ,, | 164 |
| Joseph and Smithem | City of Westminster | 13 |
| ,, ,, ,, | Borough of Chelsea | 20 |
| Judges, W. W. | Cheap Cottages Exhibition | 142 |

| | | PAGE |
|---|---|---|
| Lovegrove, E. J. ... ... ... ... | Hornsey Corporation ... ... ... ... | 82 |
| Lucas, Geoffry ... ... ... ... | Garden City, Letchworth ... ... ... ... | 69 |
| ,, ,, ... ... ... ... | Cheap Cottages Exhibition ... ... ... | ...144, 176 |
| Martindale, A. T. ... ... ... ... | ,, ,, ,, ... ... ... ... | 174 |
| McKewan, Arthur ... ... ... ... | Northfield, Worcestershire ... ... ... ... | 108 |
| Measures, Harry B. ... ... ... ... | Marylebone Borough Council ... ... ... | 17 |
| ,, ,, ... ... ... ... | Rowton Houses, London ... ... ... ... | 29 |
| ,, ,, ... ... ... ... | Rowton House, Birmingham ... ... ... | 37 |
| Milne, Oswald P. ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 172 |
| Oxtoby, Wm. ... ... ... ... ... | Camberwell Borough Council ... ... ... | 53 |
| Parker, Barry ... ... ... ... ... | Earswick Garden Village ... ... ... .. | 80 |
| Picton and Hope ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 146 |
| Platts, J. ... ... ... ... ... | Borough of Rotherham ... ... ... | ...112, 117 |
| Price, Henry ... ... ... ... ... | City of Manchester ... ... ... ... | 101 |
| Prince, Harry .. ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 142 |
| Riley, W. E. ... ... ... ... ... | London County Council ... ... ... ... | 2 |
| Settle, W. Moss ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 177 |
| Smith and Brewer ... ... ... ... | Small Holdings Association, Newdigate ... | ...112, 116 |
| ,, ,, ,, ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 188 |
| Troup, F. W. ... ... ... ... ... | ,, ,, ,, ... ... ... ... | 160 |
| Tylor, H. Bedford ... ... ... ... | ,, ,, ,, ... ... ... ... | 136 |
| Unwin, Raymond ... ... ... ... | Earswick Garden Village ... ... ... ... | 80 |
| Wallis, W. E. ... ... ... ... ... | Peabody Trust ... ... ... ... ... | 9 |
| Wells, A. Randall ... ... ... ... | Cheap Cottages Exhibition... ... ... ... | 166 |
| Wheeler (Frederick) and Son... ... ... | Model Cottages, Sutton ... ... ... | ...111, 114 |
| ,, ,, ,, ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 171 |
| Whipham, E. A. ... ... ... ... | ,, ,, ,, ... ... ... ... | 168 |
| Whitaker, H. ... ... ... ... ... | Cottages, Nelson, Lancs. ... ... ... ... | 110 |
| Whitbread, R. ... ... ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 152 |
| White and Stephenson ... ... ... | Cottages, Heaton, Newcastle-on-Tyne ... | ...113, 118 |
| Williams and Hodgson ... ... ... | Cheap Cottages Exhibition ... ... ... ... | 141 |
| Wood, Kenneth ... ... ... ... | ,, ,, ,, ... ... ... ... | 105 |

# LIST OF MUNICIPAL BODIES, PRIVATE OWNERS AND BUILDERS, &c., WHOSE DWELLINGS ARE ILLUSTRATED.


| | PAGE |
|---|---|
| Artizans', Labourers' and General Dwellings Company, Limited ... | Noel Park Estate ... ... 91 |
| Asbestic Brick and Tile Company ... ... ... ... ... | Cheap Cottages Exhibition ... 154 |
| Bateman, A. J. ... ... ... ... ... ... ... | ,, ,, ,, ... 164 |
| Battersea Borough Council ... ... ... ... ... | 47 |
| Bermondsey, Metropolitan Borough of ... ... ... ... | 25 |
| Birmingham Rowton Houses, Limited ... ... ... ... | 36 |
| Bournville Village Trust ... ... ... ... ... | Garden Village ... ... 71 |
| ,, ,, ,, ... ... ... ... ... ... | Cheap Cottages Exhibition ... 136 |
| Bradford, City of ... ... ... ... ... ... ... | 99 |
| British Metallic Roofing and Construction Company ... ... | Cheap Cottages Exhibition ... 168 |
| British Uralite Company ... ... ... ... ... ... | ,, ,, ,, 171, 182 |
| Camberwell Borough Council ... ... ... ... ... | 53 |
| Carwin, Miss ... ... ... ... ... ... ... | First Garden City ... ... 69 |
| Cheap Cottages Exhibition ... ... ... ... ... | 123 to 194 |
| Chelsea, Metropolitan Borough of ... ... ... ... | 21 |
| Colmore Estate, Birmingham ... ... ... ... ... | 41 |
| Concrete Machinery Company ... ... ... ... ... | Cheap Cottages Exhibition .. 132 |
| Croydon, County Borough of ... ... ... ... ... | 88 |
| Cubitt's Re-inforced Concrete Cottage ... ... ... ... | Cheap Cottages Exhibition ... 184 |
| Darlington Construction Company ... ... ... ... | ,, ,, ,, ... 171 |
| Earswick Garden Village, West Huntington ... ... ... | 81 |
| Eastleigh Cottages, L. & S. W. Railway Co. ... ... ... | 96 |
| Fireproof Partition and Spandrel Wall Company ... ... | Cheap Cottages Exhibition ... 156 |
| First Garden City, Letchworth ... ... ... ... ... | 63—69 |
| Garden City, Letchworth ... ... ... ... ... | 63—69 |
| Gooch, G. P. ... ... ... ... .. ... ... | Cheap Cottages Exhibition ... 172 |
| Gradwell (W.) & Co., Ltd. ... ... ... ... ... | ,, ,, ,, 177 |
| Green, Arthur ... ... ... .. ... ... ... | ,, ,, ,, 174 |
| Hanley County Borough ... ... ... ... ... ... | 111, 115 |
| Hawkins, T. J. & Co. ... ... ... ... ... ... | Cheap Cottages Exhibition ... 180 |
| Heatley-Gresham Motor Company, Limited ... ... ... | Garden City, Letchworth ... 64 |
| Heaton, Newcastle-on-Tyne ... ... ... ... ... | Cottages ... ... ...113, 118 |
| Holford, F. H., Newcastle-on-Tyne ... ... ... ... | 105 |
| Hornsey Corporation ... ... ... ... ... ... | 82 |
| Latchmere Estate, Battersea ... ... ... ... ... | 47 |
| Leek Model Dwellings ... ... ... ... ... ... | 119 |
| Letchworth Building Syndicate ... ... ... ... ... | Cheap Cottages Exhibition 127, 140 |
| Letchworth, First Garden City ... ... ... ... ... | 63 |
| Lever Bros., Limited, Port Sunlight ... ... ... ... | 76 |
| Liverpool, City of ... ... ... ... ... ... | 43 |
| London County Council ... ... ... ... ... ... | 3 |
| London & South Western Railway Co. ... ... ... ... | Eastleigh Cottages ... ... 96 |

| | | PAGE |
|---|---|---|
| Mack Partition Company ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 192 |
| McManus, J. ... ... ... ... ... ... ... | ,, ,, ,, | 180 |
| Manchester, City of ... ... ... ... ... ... | | 101 |
| Marylebone Borough Council ... ... ... ... ... | | 17 |
| Miller, G. Christie ... ... ... ... ... ... | Cheap Cottages Exhibition | 140, 162 |
| Nelson (Lancs.) ... ... ... ... ... ... ... | Cottages ... ... ... | 110 |
| Newcastle-on-Tyne, City of ... ... ... .. ... | | 105 |
| Newdigate, Small Holdings Association ... ... ... ... | | 112, 116 |
| Noel Park Estate ... ... ... ... ... ... | | 91 |
| Northfield Cottages, Worcestershire .. ... ... ... | | 108 |
| Peabody Trust ... ... ... ... ... ... .. | | 9 |
| Port Sunlight ... ... ... ... ... ... ... | | 77 |
| Potter & Co., Limited ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 148 |
| Ripley ... ... ... ... ... ... ... ... | Cottages ... ... ... | 109 |
| Rotherham, County Borough of ... ... ... ... ... | | 112, 117 |
| Rowntree, Joseph ... ... ... ... ... ... ... | Earswick Garden Village Trust | 80 |
| Rowton Houses, Limited ... ... ... ... ... ... | | 29 |
| Rowton House, Birmingham ... ... ... ... ... | | 37 |
| Salford, Borough of ... ... ... ... ... ... | | 60 |
| Scott, William ... ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 160 |
| Shrouder and Matthews ... ... ... ... ... ... | ,, ,, ,, ... | 134 |
| Small Holdings Association, Newdigate ... ... ... ... | Cottage ... ... | 112, 116 |
| Society of Artists ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 134 |
| Southampton Corporation ... ... ... ... ... ... | | 55 |
| Sutton (Surrey) ... ... ... ... ... ... ... | Model Cottages ... | 111, 114 |
| Thompson, W. ... ... ... ... ... ... ... | Cottages at Heaton ... | 113, 118 |
| Tuckett, Ivor Ll. ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 172 |
| Wells and Pratt ... ... ... ... ... ... ... | ,, ,, ,, ... | 184 |
| Westminster, City of ... ... ... ... ... ... | | 13 |
| Wire Wove Roofing Company ... ... ... ... ... | Cheap Cottages Exhibition ... | 168 |
| Wright, R. J. & Co. ... .. ... ... ... ... | ,, ,, ,, ... | 166 |

"To mak' a happy fireside clime
For weans and wife—
That's the true pathos and sublime
Of human life."—BURNS.

# INTRODUCTION.

UNTIL the passing of the "Housing of the Working Classes Act, 1890," housing was left to private enterprise, and the gravity of the needs and requirements of the wage-earners of this country had not been realised. Since it passed into law, several municipalities have taken advantage of the Act. Their endeavours to put its meaning into force have not passed without criticism; it would have been an exception in mundane affairs if mistakes had not been made. Abundant justification has, however, been proved for municipal intervention, especially in such densely crowded cities as London, Liverpool, and Manchester; and in housing, as in other undertakings, experimental stages are inevitable.

The **main provisions** of the Act and its amendments will no doubt be interesting to many readers. They are as follows:—

I. Land or houses may be purchased, or houses leased by local authorities, compulsorily if need be, either within or without the limits of their district, for the purpose of providing for present or future housing accommodation for the working classes.

II. Land so acquired may be sold or exchanged, if necessary, or it may be leased to anyone on the condition that working-class houses exclusively shall be erected and maintained thereon.

III. The Public Works Loan Commissioners are empowered to advance money "for the purpose of constructing or improvement of dwellings for the working classes:"

(*a*) To any company established for the purpose, or employing persons of the working classes, or

(*b*) To a private freeholder, or

(*c*) To any holder of a lease of which the unexpired portion is not less than fifty years.

IV. If advantage of these provisions be not taken by private investors, local authorities may themselves

(*a*) Build houses for the working classes, or

(*b*) Convert or enlarge existing buildings to provide such dwellings, and

(*c*) Furnish such dwellings, if need be.

If, after seven years, houses so provided are found to be unnecessary or too expensive, they may be sold.

For each cottage so provided there may be a garden of not more than half an acre in extent, not exceeding £3 per annum in value.

The first three of these provisions render it possible for any number of such industrial villages or suburbs to be erected in this country, when once public opinion is aroused both to the need and the possibility of supplying them.

| | | PAGE |
|---|---|---|
| Mack Partition Company ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 192 |
| McManus, J. ... ... ... ... ... ... ... | ,, ,, ,, | 180 |
| Manchester, City of ... ... ... ... ... ... | | 101 |
| Marylebone Borough Council ... ... ... ... ... | | 17 |
| Miller, G. Christie ... ... ... ... ... ... | Cheap Cottages Exhibition | 140, 162 |
| Nelson (Lancs.) ... ... ... ... ... ... ... | Cottages ... ... ... | 110 |
| Newcastle-on-Tyne, City of ... ... ... ... ... | | 105 |
| Newdigate, Small Holdings Association ... ... ... ... | | 112, 116 |
| Noel Park Estate ... ... ... ... ... ... | | 91 |
| Northfield Cottages, Worcestershire ... ... ... | | 108 |
| Peabody Trust ... ... ... ... ... ... ... | | 9 |
| Port Sunlight ... ... ... ... ... ... ... | | 77 |
| Potter & Co., Limited ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 148 |
| Ripley ... ... ... ... ... ... ... ... | Cottages ... ... ... | 109 |
| Rotherham, County Borough of ... ... ... ... ... | | 112, 117 |
| Rowntree, Joseph ... ... ... ... ... ... ... | Earswick Garden Village Trust | 80 |
| Rowton Houses, Limited ... ... ... ... ... ... | | 29 |
| Rowton House, Birmingham ... ... ... ... ... | | 37 |
| Salford, Borough of ... ... ... ... ... ... | | 60 |
| Scott, William ... ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 160 |
| Shrouder and Matthews ... ... ... ... ... ... | ,, ,, ,, ... | 134 |
| Small Holdings Association, Newdigate ... ... ... ... | Cottage ... ... | 112, 116 |
| Society of Artists ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 134 |
| Southampton Corporation ... ... ... ... ... ... | | 55 |
| Sutton (Surrey) ... ... ... ... ... ... ... | Model Cottages ... | 111, 114 |
| Thompson, W. ... ... ... ... ... ... ... | Cottages at Heaton ... | 113, 118 |
| Tuckett, Ivor Ll. ... ... ... ... ... ... | Cheap Cottages Exhibition ... | 172 |
| Wells and Pratt ... ... ... ... ... ... ... | ,, ,, ,, ... | 184 |
| Westminster, City of ... ... ... ... ... ... | | 13 |
| Wire Wove Roofing Company ... ... ... ... ... | Cheap Cottages Exhibition ... | 168 |
| Wright, R. J. & Co. ... ... ... ... ... ... | ,, ,, ,, ... | 166 |

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The dwellings dealt with in the following pages may be divided into four types or classes, viz. :—

Block Dwellings and Rowton Houses.
Tenements or Cottage Tenements.
Cottages and Villages.
Garden Cities.

## Block Dwellings and Rowton Houses.

The term "**block dwelling**" is applied to a large building of several stories in which various rooms or tenements are grouped round a few main staircases. Generally speaking, there are two varieties of tenements in block dwellings—namely, "self-contained" and "associated." A self-contained tenement is one which has a w.c. and scullery or scullery-laundry of its own. An associated tenement is one which has only the use of a w.c. and laundry in common with one or more adjoining tenement or tenements, and generally the use of a sink for drawing water when the laundry is occupied. Associated tenements are built only by bodies such as the Guinness Trust, the Peabody Trust, and those Municipal Corporations who desire to house the lowest paid class of wage-earners. An associated tenement is usually let at less rent than a self-contained tenement with the same number of rooms.

Tenements in a block building may consist of a combined living and bedroom; a living room and one bedroom; a living room and two bedrooms; and, occasionally, a living room with three or four bedrooms, in addition to the w.c. and laundry accommodation just mentioned.

The tenements of all block buildings are entered from a common staircase or from an outside balcony. The latter is an objectionable feature for many reasons. The cost of construction is lessened in proportion to the number of tenements that can be grouped round one staircase. Such tenements are rarely built of less than four, or more than six stories. The most usual number is five without, or six with, a half basement. It is obvious that the greater the number of stories, the less will be the cost of the building, since the cost of land, foundations, paving, drainage, and roofing is a constant factor, and, being spread over a larger number of rooms in a five-story than in a four-story building, would reduce the average. The buildings, wherever practicable, should face east and west, so that every habitable room may obtain a share of sunlight.

This class of dwelling should be very substantially built. Staircases, corridors, and w.c.'s should have tile dados to save frequent redecoration, and architectural effect should be obtained by a picturesque sky-line and variety in the treatment of the windows.

The most enthusiastic advocate of the block system cannot claim for it an unqualified success; this method presumably houses the dispossessed population from the slum-land areas demolished for improvements, but there is too much herding together in the attempt to put as much as possible on a given area of land in order to make it pay. The dispossessed seldom seek accommodation in the new quarters, and what we now consider well-appointed blocks of tenements will probably cease to be regarded with much favour in years to come. The fact that a congregation of people, each having different ideas and tastes, without power to order their own house or to carry out their own desires, with no interest in their dwellings other than that of lodgers, cannot make a people really happy and contented, and the public-house is too often the man's recreation room, and the court-yard the woman's gossiping ground. There is, therefore, some justification for the belief that block dwellings, as at present constructed, cannot be regarded as having solved the question.

The rents of block dwellings vary from 3*s*. to 4*s*. for a one-room tenement, 4*s*. to 7*s*. 6*d*. for a living room and 2 bedrooms, and 5*s*. 3*d*. to 10*s*. 6*d*. for a tenement with a living room and three bedrooms. The cost of this kind of building is from 8*d*. to 10*d*. per foot cube.

The Rowton Houses are admirable institutions, for they possess a completeness which the block dwellings seem to lack. Whilst the Rowton Houses can scarcely be classed under the category of Housing Schemes, yet, they form so valuable a link in the matter of housing, that they are dealt with at some length in the text of the book. The nation is certainly indebted to the founder of these magnificent "Poor Men's Hotels."

It is with a great amount of diffidence that I have suggested a scheme for thickly populated districts, whereby some of the difficulties which have been anticipated might be dealt with; but the actual working out of such a scheme must be left to professional men, who, fortunately, have of late shown such an interest in the question. Briefly stated, this scheme is a combination of the "Rowton House" with the "tenement" system of housing. Some of the schemes herein illustrated lend themselves splendidly to such an idea, and it will not be difficult for the reader to see that the essentials of happiness and well-being, so far as they are dependent on environment, could thus be found. The height of the dwellings should be limited to three floors, and a bath, with hot water supply provided, in each house. There should be erected in the main building, or adjacent thereto, smoking and recreation rooms for the men, a sewing-room for the women, a play-room for the children, and a library available to all. Particular care should be taken to provide a day nursery for the children. Wash-houses and laundries must be included; all flues should be artificially drawn to a centre, with a detached chimney and a smoke-consuming apparatus. The roof could be made a garden, and in this way there is reason to believe that an attractiveness and compactness could be brought about which would be appreciated by the tenants, and tend to their moral and social elevation. The Housing Superintendent could supervise the whole without adding to the upkeep.

Such a scheme could be made self-supporting, and it is very probable that an experiment upon these lines will be made in London before long.

## Tenements or Cottage Tenements.

The **cottage tenement** is practically a cottage of two or three stories high, containing one tenement or flat on each floor. The accommodation in this type of cottage is similar to that supplied in block dwellings—viz., a living room, scullery, w.c., and one or more bedrooms; but there is no doubt that the greater privacy secured by having a separate access to each tenement, and the absence of many flights of stairs, renders cottage dwellings more desirable than block buildings. Another attractive feature is the provision of a garden for each tenant. These cottages are never built more than three floors high—ground, first, and second floors, the reason being that the cost of land where they are adopted is comparatively small. It must, however, be borne in mind that it is absolutely impossible to provide this type of dwelling in commercial centres, where the price of land is very high.

Experience shows that properly planned and economically erected self-contained houses and tenements can be made to show a fair return on the capital outlay, and it has been proved over and over again that people living in them under the necessary conditions are usually happy and contented.

## Cottages and Villages.

The ideal home for the working class is undoubtedly the **self-contained cottage.** It is, of course, impossible to deal with all the types of cottage illustrated in this volume, but the following is a description of what the cottage should be:—

The house should face south-east and be set well back from the roadway. The approach to the doorway should be made by a gravel path, each side of which would be used as a flower garden, and the ground at the back of the house cultivated as a vegetable garden. From the entrance door a small hall would be entered, which would contain the staircase and a room for bicycles and the like; while, from the hall, access to the parlour, living room, and the kitchen-scullery would be obtained. A separate staircase-hall is considered essential, as, if the stairs actually ascend from the living room, there will be draughts and dirt, necessitating more cleaning, and products of combustion from lighting, heating, and cooking, and bad air will be conveyed from the living room to the bedrooms. These are serious drawbacks which must be avoided. A house planned with a staircase leading from the living room is never entirely satisfactory.

The parlour living room should be of good size, not less than 15 ft. by 12 ft., and should contain a kitchener, of pleasant appearance, not less than 6 ft. run of cupboard room for linen, &c., and a movable dresser. The latter should really be a piece of furniture belonging to the

landlord. There should be two windows in this room, one at least 5 ft. wide, the other smaller, used mainly for the purpose of through ventilation.

The kitchen-scullery should be a large room, not less than 12 ft. by 11 ft., and should contain a cooking range for ordinary use. The sink should be placed in a recess having cupboard doors, so that these could be thrown open when the sink is in use, and the recess would become part of the kitchen, and, when closed, the unpleasant sight of a sink (and they are always unsightly) should not meet the eye.

A bath is a *sine quâ non* in every cottage; this should be in a recess in the kitchen-scullery, similar to the sink recess, so that a bath can be taken quite privately, and it should have a constant supply of hot water from the kitchen range.

A porch should lead from the kitchen-scullery to the house yard, and the w.c. and coal-shed should be entered from this porch, thus avoiding an unpleasant publicity. The larder should be situated off the kitchen-scullery.

On the first floor should be three bedrooms, containing not less than 1,100, 800, and 600 cubic ft. respectively, and there should be a small landing, on which a linen cupboard could be placed.

Such a cottage as that described above would doubtless meet all the requirements of the home and help to brighten the lives of the tenants, benefit their health and give that stimulus to a much wanted pride of home and independence of spirit, without which no workman or his family has the self-respect which is so valuable an asset to the nation.

As to the general construction, the walls should be 11 in. hollow walls, tied together with iron ties; the damp course should be of slates or asphalt, the floor of $1\frac{1}{4}$ in. wood blocks laid in bitumen on concrete, which latter should cover the whole site. In the entrance hall, back porch, w.c., coal-shed, larder, &c., the wood blocks should be replaced by 6 in. red quarries. "Mack," or similar fireproof, vermin-proof, sound-proof slabs, should form the internal partitions, and the ceilings should be covered with ceiling slabs of the same manufacture, which would slightly lessen the cost and be more sanitary. The roofs should be covered with machine-made smooth-faced tiles. Sand-faced tiles, although artistic in appearance, are not so serviceable.

It is for the builder to decide whether a house having the accommodation outlined can be erected for a sum small enough to allow it to be let at a reasonable rental. There is no doubt, however, that such a house can be built for £150, so that the solution of the rural housing question is surely well on its way to realisation.

Artistic appearance is very desirable, but this is often obtained at the expense of internal comfort and durability. Whilst the successful artistic efforts of many architects in search of external effect must be acknowledged, it is better to have a plain building simply whitewashed externally, but having good and wholesome accommodation within, than to have an artistic exterior obtained at the cost of comfort in the home, however trifling.

It is at such places as Port Sunlight, Bournville, and Rowntree Villages, and the Garden City, Letchworth, on the outskirts of towns and in rural districts, that dwellings of this kind could well be erected. The Cheap Cottages Exhibition, to be held at Letchworth (Herts) will, in this connection, be interesting as affording evidence of cost and other particulars with regard to materials and workmanship. It will also dispel a good many illusions, for much has been written of late which, to say the least of it, is not the outcome of practical experience.

## Garden Cities.

Are Garden Cities likely to attract those people who, for health's sake and for their children's sake, should turn to them?

Will the dweller in the City Slum seek a home and occupation awaiting him there?

Experience tells us that workmen living in the towns are seldom attracted towards the garden; they prefer other relaxations, and appreciate the many opportunities offered by town life.

The Letchworth Garden City, which is fully described in an article specially devoted to it, pp. 63 *et seq.*, is the most ambitious of all undertakings of the kind, but I do not think the attainment of its magnificent ideals would have been possible had it not been decided to make it a city in fact, by providing employment for the wage-earning classes.

There is much to be said in praise of the promoters of the Garden City, who are carrying out a noble work, which will form a valuable asset of the Empire, and which future generations will look back upon with pride.

Hogarth Buildings, Millbank.

Average cost per room, £91, or $8\frac{3}{4}d.$ per foot cube. Average rent, 3*s.* 3*d.* per room per week.

# MODERN HOUSING.

## LONDON COUNTY COUNCIL.

No work on housing could be considered complete without at least mention being made of the work undertaken by the London County Council.

At the same time, it must be frankly admitted that the work is so colossal and varied in character that a full account of it would easily fill the pages of a very large volume. Consequently, the writer has aimed at a summary of the work only.

The London County Council succeeded the Metropolitan Board of Works in the year 1889, and very soon certain representations were made by them to the Government, with the result that the "Housing of the Working Classes" Act of 1890 was passed.

For some years the efforts of the Housing Committee appear to have been concentrated on the clearance and development of a site of 15 acres, situate at East London, known as the Boundary Street Estate, and on March 3rd, 1900, King Edward VII. (then Prince of Wales) completed the labours of seven years by formally opening the many blocks of working-class dwellings. His Majesty then heartily congratulated the London County Council upon the undertaking thus brought to a successful issue.

Such a cordial expression of approval on the part of His Majesty would be considerable encouragement to those who had been honoured by a share in the execution of this great enterprise, which involved an outlay of over a quarter of a million sterling.

From that time to the present, with never-ending activity, housing schemes have been multiplied and projected until they have reached gigantic proportions, and not only are insanitary areas being cleared, at a cost of nearly a million and a quarter pounds, but 15,440 tenements and 1,848 cubicles are being provided, including a large number of self-contained houses on the Estates at Totterdown Fields and White Hart Lane, Tottenham, which, when completed, will make provision for nearly 100,000 inhabitants, involving an expenditure of nearly five millions sterling, the whole of which will be a remunerative expenditure, no charge whatever being made on the county rate in respect thereof.

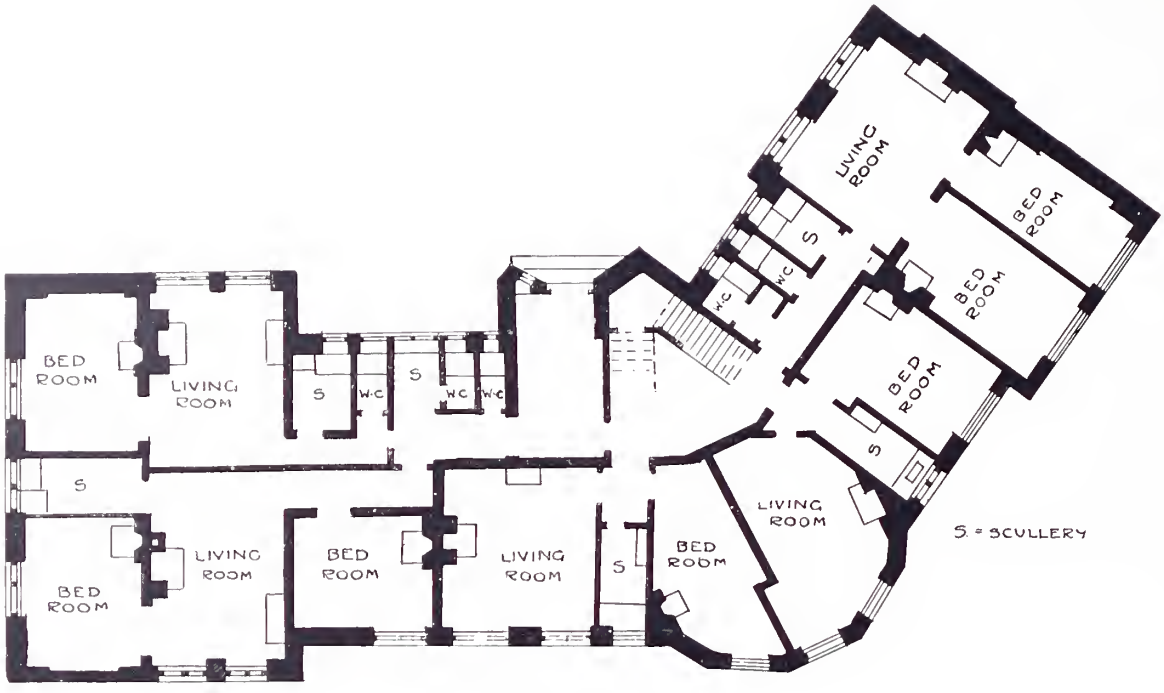
Every conceivable accommodation is to be found in the numerous undertakings, and all classes are catered for; tenements of from one to six rooms and self-contained houses are provided in many parts of London, and, for 6*d*. a night, comforts of an amazing description can be had at the Council's lodging houses.

It may be stated that a period of sixty years is allowed in which to repay the capital cost of the land and buildings, and the respective undertakings appear to be self-supporting.

The Boundary Street scheme, already referred to, is composed of self-contained and "associated" tenements. They are mostly four stories high; the living-rooms contain about 160 square feet, and the bedrooms about 110 square feet.

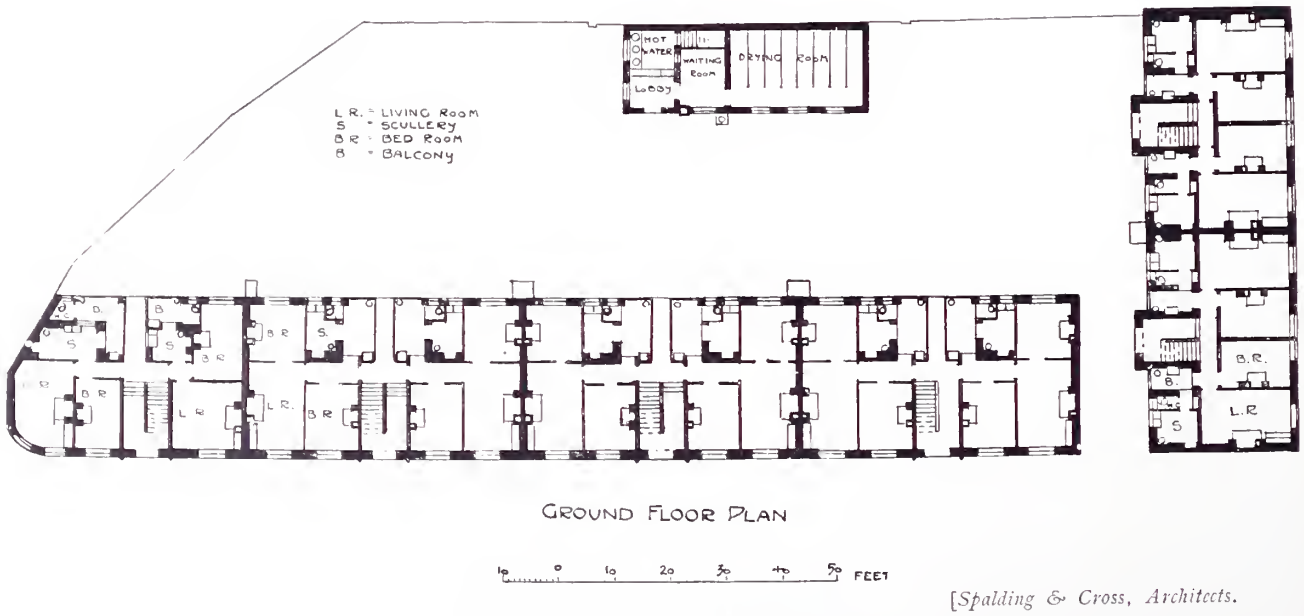
The Westminster Millbank Estate may be taken as typical of most of the block dwellings. They are composed of one to five-room tenements, those of two and three rooms predominating. The cost averages about £91 per room, or $8\frac{3}{4}d$. per foot cube, and the average rent is 3*s*. 3*d*. per room. The blocks are built in brick, the top storey being in the Mansard roof.

There is generally an open space of about 40 ft. at the rear of each block; the height of all the rooms is 8 ft. 6 in. clear, all the floors are fire-resisting and the boards are nailed direct on




[*W. E. Riley, Architect.*

Leighton and Millais Buildings, Millbank.




[*Spalding & Cross, Architects.*

Block Buildings at Millbank.

to coke breeze concrete. The illustration of the Millbank Dwellings conveys a very good idea of the architecture generally, which is pleasing and artistic, without being costly.

Containing Living-Room, Scullery, and Two Bedrooms: 7*s.* and 7*s.* 6*d.* per week inclusive.

[*W. E. Riley, Architect.*

Containing Living-Room, Scullery, and Two Bedrooms: 7*s.* and 7*s.* 6*d.* per week inclusive.

Containing, on *First* Floor, Living-Room, Scullery, and Two Bedrooms: 6*s*. 6*d*. per week inclusive, and on *Ground* Floor, Living-Room, Bedroom, and Kitchen: 6*s*. per week inclusive.

[*W. E. Riley, Architect.*

End Cottage containing Living-Room, Parlour, Scullery, and Three Bedrooms: 12*s*. per week inclusive.
Others containing Parlour, Kitchen, and Two or Three Bedrooms: 8*s*. to 10*s*. per week inclusive.

The Totterdown Fields and Tottenham Estates are being developed on ideal lines. Although the price of the land prohibits the number of houses to the acre being limited as at Bournville and Port Sunlight, yet they are in many other respects very like those model villages.

The houses are built in blocks, in varying and pleasing styles of architecture, the forecourts with oak paling form a very nice feature, and the various types of planning clearly indicate the varied and wise provision that is being made.

The Totterdown Fields Estate contains $38\frac{1}{2}$ acres and was purchased in the year 1900 for £1,150 per acre. It is intended to erect about 2,000 workmen's dwellings, and several hundreds, of which the illustrations annexed are typical, are already built. They consist of four classes, the rents of which vary from 6*s.* to 12*s.* a week and the average cost per cottage is about £260, or $8\frac{1}{2}d.$ per foot cube. At Lordship Lane, Tottenham, the Council have secured an estate of about 225 acres at a cost of £90,000, and houses giving similar accommodation to those at Totterdown Fields are in course of erection. The estate will afford accommodation for nearly forty thousand people.

When these estates are complete, with such beauty of design and such well equipped houses, they will form a veritable picture and become a valuable asset to the Empire.

It is not too much to say that these houses will do much to stimulate and create a healthy physique; those who secure them will get houses the very best of their kind, and such as any working man would be content to settle down in happily.

The Housing Committee and the County Council as a whole have been eminently successful in these undertakings and have earned an everlasting tribute of appreciation from all those who are interested in the subject, especially from those whose lives have been enriched by their labours.

A more difficult task than that assigned to Mr. Riley, the Superintending Architect, was never undertaken by an official, and his devotion, skill and ability, together with the co-operation of his staff and all others who have contributed to the success of the work are deserving of the highest praise.

PEABODY BUILDINGS, HERNE HILL.

[*W. E. Wallis, Architect.*

Cost per room, £86. Cost per foot cube, 8*d*. Average rent of each room per week, 2*s*. 2*d*.

# THE PEABODY TRUST.

*Governors.*

His Grace the Duke of Devonshire, K.G. (*Chairman*).
His Excellency The United States Ambassador.
The Right Hon. Lord Ashcombe.
The Right Hon. Lord Revelstoke.
The Right Hon. W. H. Long, M.P.
E. A. Hambro, Esq.
J. P. Morgan, Jun., Esq.
Victor C. W. Cavendish, Esq., M.P.

*Secretary*—Mr. F. B. Crouch, 64, Queen Street, Cheapside, E.C.

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The amount originally left by Mr. Peabody was £500,000, and his object was to provide good and wholesome dwellings for the poorer working classes. He thought that, with care, such dwellings could be erected as could not only be let at considerably lower rents than those charged by the ordinary landlord, but which would also return a fair percentage on the capital expended. One cannot think of this magnificent bequest without calling to mind the words of the large-hearted and generous donor, whose princely gift has made his name memorable: "To apply the fund in the construction of such improved dwellings for the poor as may combine, in the uttermost possible degree, the essentials of healthfulness, comfort, social enjoyment, and economy." The amount spent on land and building up to the end of last year was about £1,458,651.

It may be fairly claimed that Mr. Peabody's object has been attained, for no less than 226 blocks have been erected in different parts of London, which provide accommodation for nearly 20,000 persons. The later designs are shown by the annexed illustrations.

From the annual report issued by the Secretary, Mr. F. B. Crouch, I find that, for the year 1903, the income exceeded the expenditure by £35,000. Consequently, the capital sum is increased annually, and the wishes of the donor are being realised, for Mr. Peabody upon this point said: "A century in the history of London is but a brief period comparatively with the life of man, and should your successors continue the management of the charity as you have begun it, it is my ardent hope and trust that within that period the annual receipts from rents for buildings of this improved class may present such a return that there may not be a poor working man of good character in London who could not obtain comfortable and healthful lodgings for himself and his family at a cost within his means."

The accompanying plans are what have been adopted, with slight variations, for some years past.

The blocks are generally five stories high, except the centre portion, which contains the laundries and enclosed drying-room. This portion is six stories high.

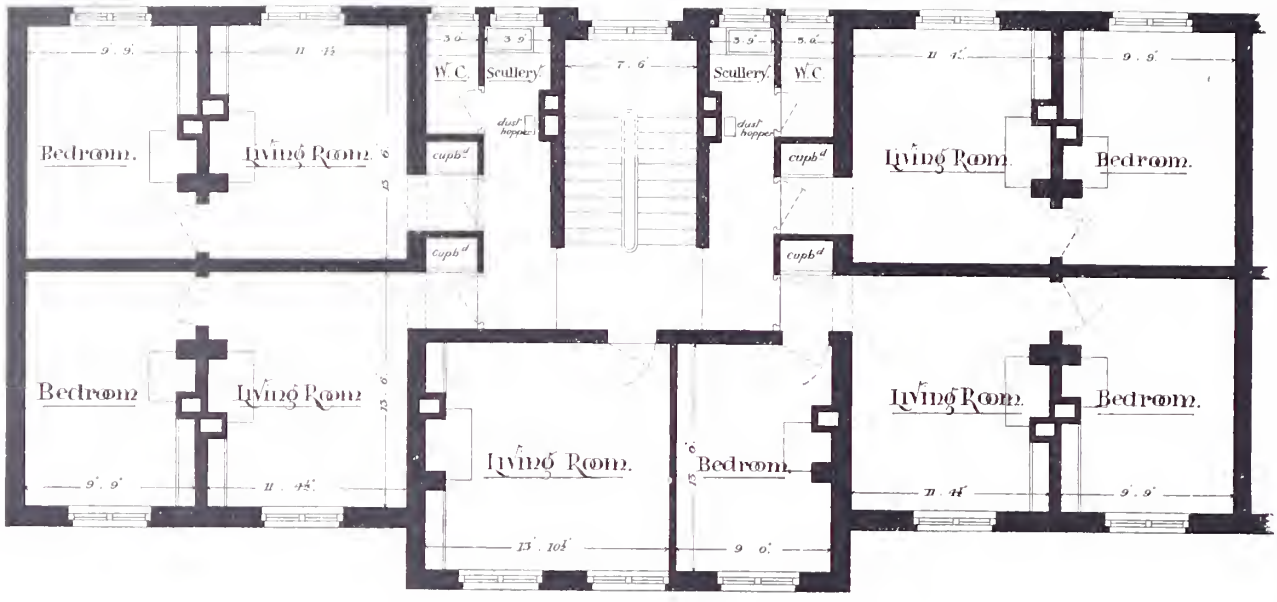
There are ten rooms on each floor, with two sculleries and two w.c.'s in well-ventilated corridors outside the dwellings. The laundries are fitted up with four sets of coppers and washing tubs; water is laid on to all. The windows are louvred and the floors asphalted on concrete.

In planning, simplicity and comfort have been aimed at, and useful proportions for the rooms kept in view. Very little space has been wasted in corridors and passages, and ample light has been secured to all parts. The rooms are all 8 ft. 6 in. in height. The living-rooms are 13 ft. 6 in. by 11 ft. 9 in., and the bedrooms 13 ft. 6 in. by 9 ft. 9 in. The single living-rooms are 14 ft. 6 in. by 12 ft. 6 in.

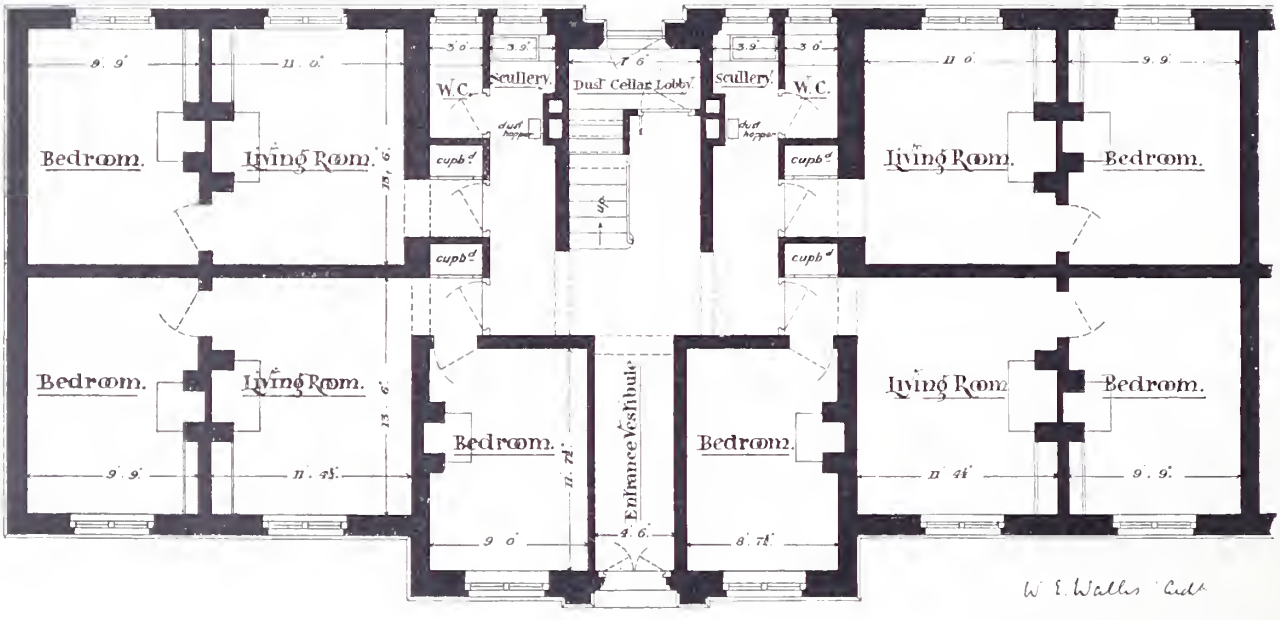
Each living-room contains a range and two cupboards. The bedrooms contain a small register stove and one cupboard fitted with hooks. Picture rails are provided in all rooms. Small zinc hoppers are provided in the external walls of rooms for ventilation, and fresh air is admitted to each fireplace through zinc tubes fixed in the floors between the jambs of the mantel and the air brick in external walls.

# PEABODY BUILDINGS.

## HERNE HILL

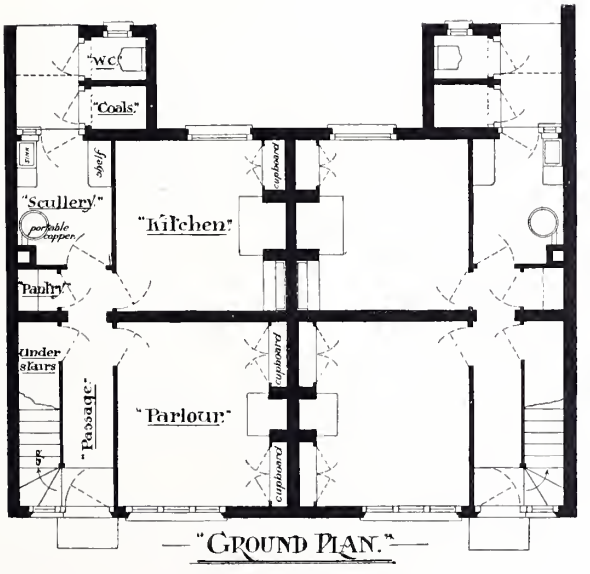



1st 2nd & 3rd FLOOR PLANS.

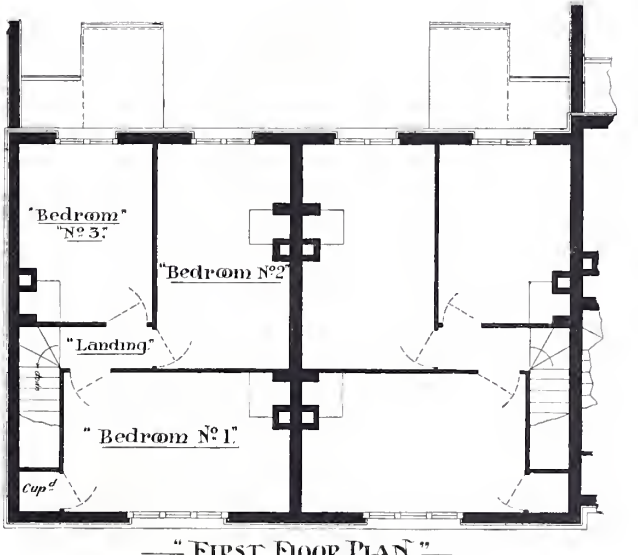



GROUND PLAN.

Cost per room, £86. Cost per cube foot. 8*d*. Average rent of each room per week. 2*s*. 2*d*.




"GROUND PLAN."




"FIRST FLOOR PLAN."

# "PEABODY COTTAGES."

W. L. Walles
ARCHITECT.

Cost per cube foot, 8*d*. Rents are 8*s*. a week exclusive of rates and taxes

Throughout the buildings the walls are of brick, rendered on the inside faces with Portland cement which is afterwards distempered. The sculleries and w.c.'s are provided in the corridors outside the dwellings. Being outside they can be inspected at any time without annoyance to the tenants, and, should any repairs be required, they can be executed without any trouble.

The floors of w.c.'s and sculleries are of concrete finished with asphalte.

The staircases are of artificial stone, and are in two short flights from floor to floor with good landings. The steps are 11 in. on tread by 6 in. rise and have a plain moulded nosing. The death rate, including the deaths of fifty-four of the inhabitants of the buildings who were removed to hospitals, was 14·7 per 1,000, which is 4·0 per 1,000 below the average of London, but in these matters, in order properly to appreciate the benefits to the health of people living in good sanitary dwellings, the comparison should not be with all London but with the district in which the dwellings are located.

The average weekly earnings of the head of each family in residence is £1 3*s*. 1*d*.; the average rent of each dwelling is 4*s*. 9¾*d*. a week and of each room 2*s*. 2*d*.

The tenements are divided into dwellings of one, two, and three rooms, and are respectively let at average weekly rents of 3*s*., 5*s*. 6*d*. and 6*s*. 6*d*.; the cost works out at £86 per room.

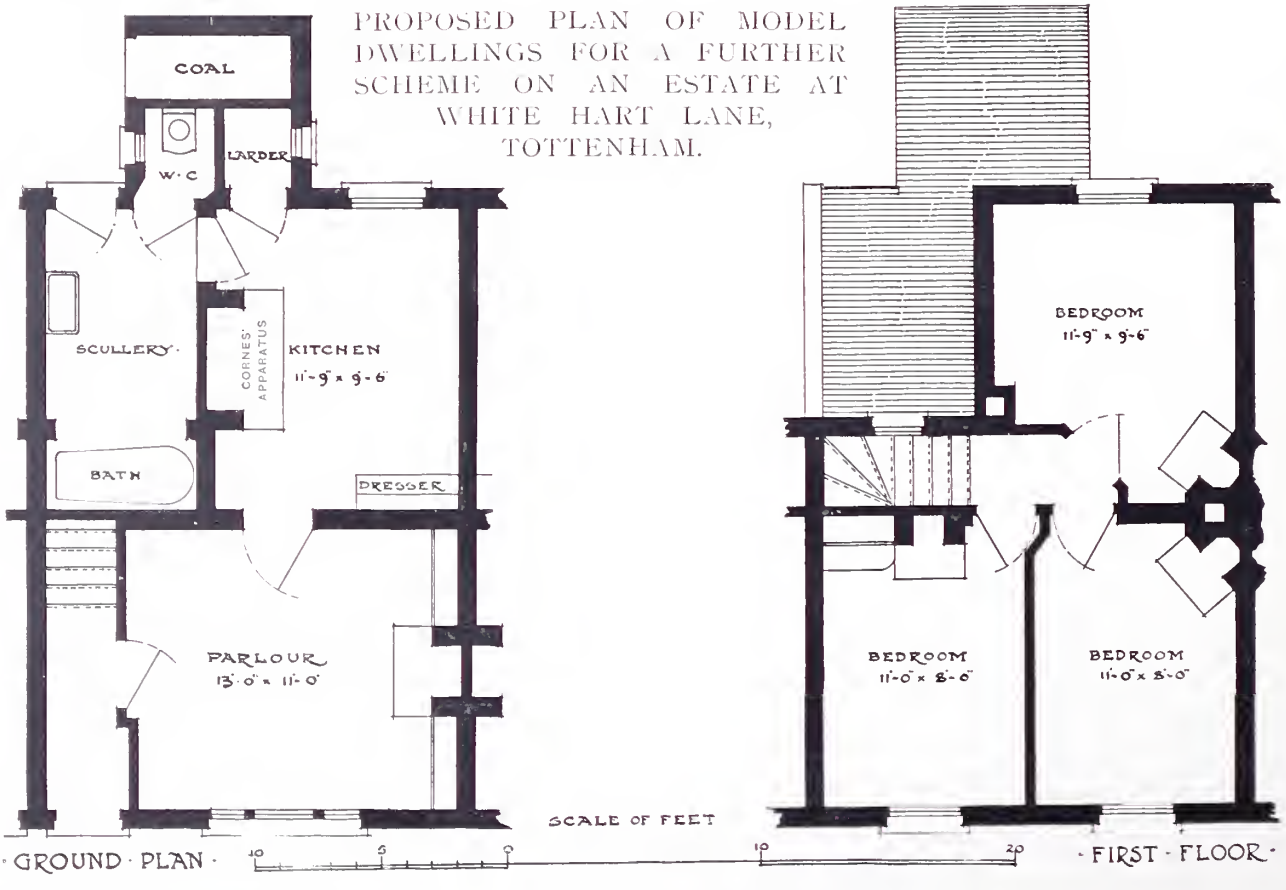
The Governors recently decided to add to the variety of accommodation by erecting on the Herne Hill Estate eighty-two cottages of five rooms each to the plans and view overleaf.

The rents are 8*s*. a week, exclusive of rates and taxes.

All the buildings are erected in a thoroughly substantial manner, the best, and consequently the most durable, materials of their respective kinds having been used, which in the long run will be found to have been a very wise provision on the part of the architect, Mr. W. E. Wallis. The cottages, like the blocks, are very substantial, the external walls being built with Portland cement and the roofs all boarded and covered with best Broseley tiles.

It is really surprising to find such excellent accommodation and workmanship at a cost of 8*d*. per cubic foot and giving a return of over 3¼ per cent.; for this the greatest credit is due to the Governors, the Architect, the Secretary and all interested in the administration of this bequest.

PROPOSED PLAN OF MODEL DWELLINGS FOR A FURTHER SCHEME ON AN ESTATE AT WHITE HART LANE, TOTTENHAM.



# CITY OF WESTMINSTER.

The Westminster City Council purchased from the Ecclesiastical Commissioners a site containing a superficial area of nearly 1½ acres, upon which to erect workmen's dwellings having a frontage to Regency Street of 305 ft., to Page Street of 175 ft., and to Vincent Street of 228 ft.

This scheme, as carried out, consists of three parallel blocks known as Norfolk House, Probyn House, and Jessel House, which are six stories in height, including half-basement and attic stories. There are two roadways, or playgrounds, 40 ft. wide between the blocks, at the ends of which arcading has been constructed to connect the buildings, so as to form continuous and artistic frontages.

The elevations are faced with red Leicester bricks, relieved with dressings of artificial stone of a pale buff tint, and here and there carved cement ornament has been introduced with excellent effect. The landings and staircases have dados of white tiles with borders of blue tiles in relief, and have been made more attractive by the use of ornamented panelled balusters instead of plain bars. The floors throughout are of fire-proof construction, and the pavings and landings are formed of granolithic material.

The buildings house about 1,600 persons, there being 793 rooms divided into 342 tenements as follows:—

44 One-room tenements, weekly rents from 3*s.* to 4*s.* 3*d.*, according to position.
159 Two-room tenements, weekly rents from 6*s.* to 7*s.*, according to position.
126 Three-room tenements, weekly rents from 8*s.* 6*d.* to 9*s.* 6*d.*, according to position.
13 Four-room tenements, weekly rents from 11*s.* 6*d.* to 12*s.* 6*d.*, according to position.

These rents include the free use of Venetian blinds, free chimney sweeping, baths, hot water supply, and use of drying-room.

In considering the above rents, it should, perhaps, be noted that the cost of the land as compared with that less centrally situated in the Metropolitan area, although appreciably lower than market value, was extremely high; whilst the refusal of the Treasury to allow a longer period than sixty years for the recoupment of outlay on buildings of this character has necessitated a higher charge than would otherwise have been practicable. But the rents charged are considerably lower than those ruling in the neighbourhood.

In order that the rents should be as low as possible, the one, two, and three-room tenements have been built on the "associated" principle, *i.e.*, the sanitary accommodation and laundries are shared by two tenants, or, in the case of single-room tenements, three tenants; but the four-room tenements are self-contained, each having a separate scullery and w.c.

The living-rooms have an average area of 154 ft. The bedrooms of the *two-room* tenements have an average area of 113 ft.; the two bedrooms of the *three-room* tenements an area of 124 ft. and 98 ft., and the three bedrooms of the *four-room* tenements an area of 110 ft., 98 ft., and 94 ft. respectively. All the three and four-room tenements have entrance lobbies, to give them greater privacy.

Every room has been fitted with Venetian blinds presented to the Council by the architects. Each living-room is supplied with a self-setting close range fitted with removable oven, a cupboard divided into two parts, the upper part (properly ventilated) for the storage of food, the lower part arranged as a coal bunker and as a receptacle for household utensils; a dresser, or row of shelves, has also been provided. Each bedroom has been fitted with a stove, and supplied with a good-sized cupboard with hooks for hanging clothes. The windows have special arrangements for affording ventilation when closed, and above the tenement doors there are ventilating fanlights which secure a through draught from the spacious staircases, all of which are lighted by windows opening directly from the streets or playgrounds between the blocks. Every tenement is lighted by gas on the penny-in-the-slot system, and a suitable gas cooking stove or griller (which will be found most useful during the summer months when no fire is required) has been provided in every living-room. On every landing there is a laundry fitted with a boiler and a glazed-ware washing trough. Each tenant has the exclusive use of the laundry on his or her floor for one day

# CITY OF WESTMINSTER WORKMEN'S DWELLINGS.

[*Joseph & Smithem, Architects.*

Cost per room, £74 6*s.* 6*d.* Cost per foot cube, $8\frac{3}{4}$*d.* Rentals *from* :—one-room tenement, 3*s.*; two-room, 6*s.*; three-room, 8*s.* 6*d.*; four-room, 11*s.* 6*d.*

ASSOCIATED SINGLE AND TWO ROOM TENEMENTS

: CITY OF WESTMINSTER :

REGENCY STREET DWELLINGS

[ *Joseph & Smithem, Architects.*

in the week. Sinks and taps for ordinary water service are placed on each landing in addition to the water supplies in the laundries.

Additional cupboards for storage have been provided on the landings and can be hired, if necessary, at the rate of 2*d.* per week. The bathrooms, nine in number, are in the basement of one of the blocks, Jessel House, and each contains a white glazed fire-clay bath, supplied with hot and cold water. The baths are free to tenants at separate times for males and females.

The urn-room adjoins the bathrooms and is fitted with a series of copper kettles from which boiling water will be served at breakfast and tea times. Hot water is obtainable at all hours day and night from taps in the areas. Adjacent to the urn-room is the drying-room, where a very high temperature is permanently maintained for the purpose of drying the tenants' washing, without charge. Next to the drying-room is the stoke-hole, fitted with a boiler which supplies heat to the drying-room and hot water to the nine baths and the permanent hot-water service taps.

| Accommodation. | Westminster City Council Regency Street (Associated.) |
|---|---|
| 1-room tenements | 44 |
| 2-room tenements | 159 |
| 3-room tenements | 126 |
| 4-room tenements | 13 |
| | 342 |
| Number of rooms | 793 |
| Number of sculleries | — |
| **Cost of Sites and Buildings.** | |
| Cost of site | £32,000 |
| Cost of buildings | £58,940 |
| Total Cost | £90,940 |
| Area of site | 63,500 sq. ft. |
| Cost per foot super. of land | 10s. |
| Cost per foot cube of buildings | 8¾*d.* |
| Cost per room (not counting laundry as a room) including cost of land | £114 13 6 |
| Cost per room (not counting laundry as a room) excluding cost of land | £74 6 6 |
| Cost of land per room (not counting laundry as a room) | £40 7 0 |

A workshop is provided for the porters, so that any small repairs that are needed can be done on the premises. Adjacent to the workshop there are a number of lock-up sheds for perambulators or cycles, let to tenants at the nominal weekly rents of 1*d.* and 2*d.* respectively.

The cost of the land and buildings has been about £90,940, or about £5,000 less than the architects' original estimate, and the rents have been adjusted to a scale that will, after providing for a sinking fund to repay the total outlay on the buildings in 60 years, and on the land in 80 years, give a net return on the expenditure of 3¾ per cent. per annum.

The scheme is therefore self-supporting, ample provision having been made for all outgoings.

The dwellings are occupied only by members of the working classes employed at limited wages, within the City of Westminster, and have been eagerly sought after.

The Prince of Wales laid the foundation stone of these buildings, and on the 9th of May, 1904, their Royal Highnesses the Prince and Princess of Wales made an inspection of the buildings which formed the occasion of a public opening, the Mayor (Alderman T. Walter L. Emden), the chairman of the Housing Committee, Councillor Henry Tozer, and many members of the Council being present. The undertaking is a praiseworthy one, and having regard to the exceptionally high price paid for the land, the architects and the Westminster City Council are to be congratulated upon the success of the scheme. The architects are Messrs. Joseph and Smithem, of 83, Queen Street, Cheapside, London.

# MARYLEBONE BOROUGH COUNCIL.

## JOHN STREET DWELLINGS.

These dwellings have been erected by the Metropolitan Borough Council of St. Marylebone on the north side of John Street, Edgware Road, for the housing of artisans displaced by demolition of their dwellings by reason of the Council's electric lighting undertaking, and general necessary improvements in the borough. The site has a frontage in John Street of 108 ft., and a total superficial area of 9,342 ft.; the foundation stone of the dwellings was laid by the Duchess of Fife on the 12th of March, 1904.

The building consists of seven stories, comprising fifty-two self-contained tenements of one, two, or three rooms, with the usual offices.

The front elevation has been erected in red Ibstock facings, relieved above ground floor level with picked Fletton bricks, and dressings of buff terra-cotta.

The back elevation has been erected in picked Fletton facings relieved by red Ibstock bands and arches. The whole of the interior walling, except where glazed bricks are used, is built with Fletton bricks and plastered. All brickwork throughout the building has been built in Portland cement mortar.

The roof to front elevation is covered with green slates, nailed direct upon coke breeze concrete slabs, carried upon steel construction. The back portion of roof is flat, concrete and steel construction, covered with asphalte, and railed round with wrought iron railings and curb, forming a drying ground for the use of the tenants.

The basement floor is covered with a thick bed of concrete, upon which, where wooden floors are laid inside the tenements, are solid deal wood blocks. All corridors, w.c.'s, and wash-houses are finished in cement and granite chippings. The other floors are fire resisting throughout, being formed of concrete and steel, and the corridors, w.c.'s, staircase, and landings, are in Portland cement and granite chippings. The floor boards are nailed direct on to the concrete.

Especial care has been exercised in the planning and execution of all the sanitary work, both in the portion under ground and the plumber's work throughout the building.

The walls of the entrance hall, the whole of the corridors, staircase, landings, wash-house, and dust galleries are of glazed brickwork from floor to ceiling, with four courses of brown glazed skirting with ivory colour above. The fronts of the w.c.'s are also built up in glazed brickwork, and fitted with teak seats.

The lighting throughout will be by gas, the staircase, landings, and corridors by the Council, and the tenements will be provided with slot meters.

The one-room tenements average in size 12 ft. 6 in. by 12 ft., and are fitted up with larder (with window), coal cupboard, dresser, enclosed sink, cooking range and provision for gas stove; the two-room tenements have living-room, average 12 ft. 6in. by 12 ft. 6 in., fitted up with larder (with window), coal cupboard, dresser, enclosed sink, cooking range, and provision for gas stove, and a bedroom, 12 ft. by 12 ft. with mantel register.

The three-room tenements have living-room, average size 12 ft. by 12 ft., fitted with larder (with window), coal cupboard, dresser, cooking range, and provision for gas stove, and the scullery is fitted with sink, etc. The average size of bedrooms is 12 ft. by 12 ft.; there are mantel registers to each.

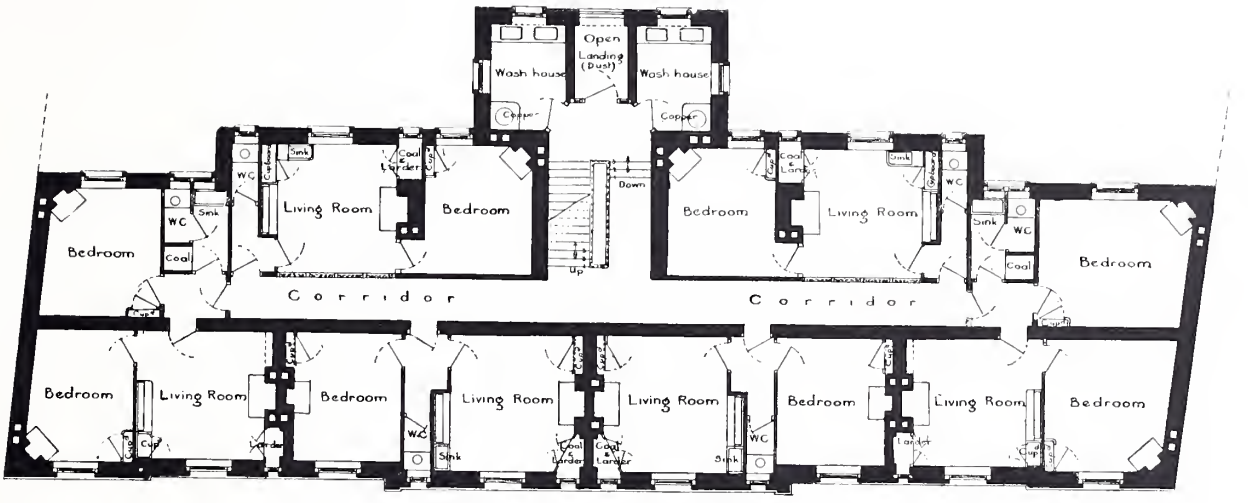
All tenements have separate w.c.'s with Doulton's water waste preventers, and pan and trap bedded in concrete up to the underside of teak seats; the living and bedrooms of the tenements are prepared with sanitary varnished papers, and all woodwork throughout is finished, combed, and varnished.

On each floor are built two wash-houses for the use of the tenants, with built-in coppers and furnace, and two large fire-clay washing troughs on glazed brick bearers with teak draining boards to each wash-house. Between these wash-houses there are dust galleries for sanitary dust-bins.

The dwellings have been erected from the designs and under the supervision of Mr. Harry B. Measures, F.R.I.B.A.

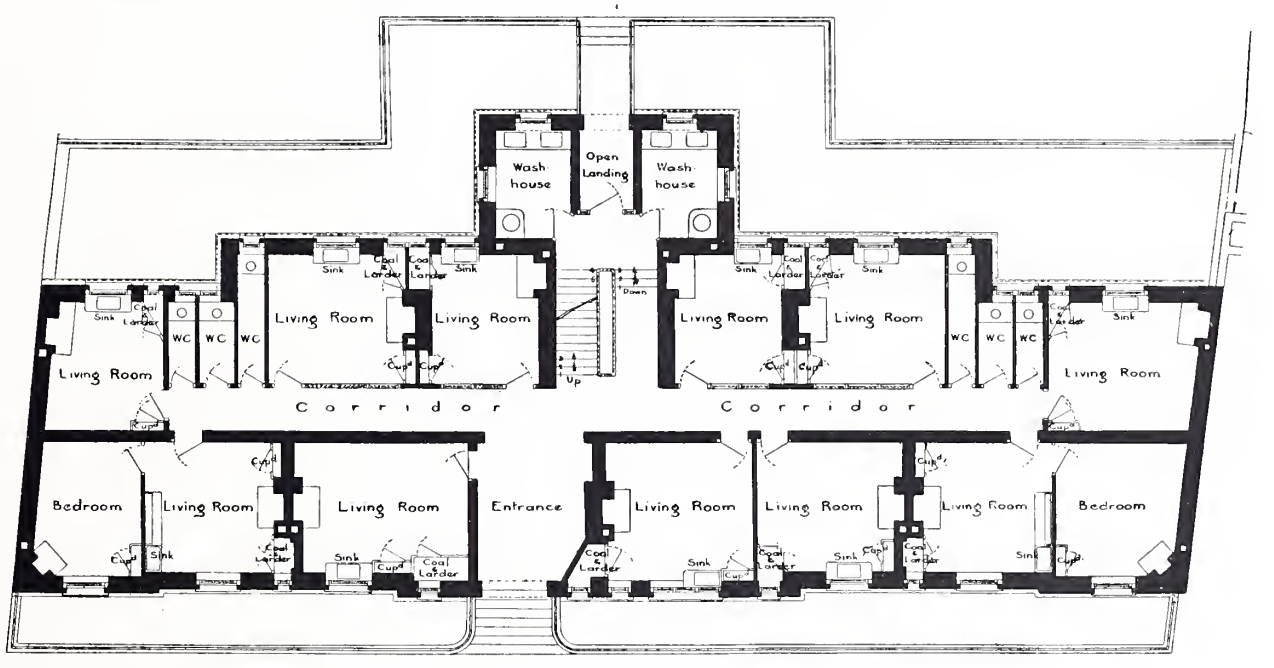
John Street Dwellings, Edgware Road.

[*Harry B. Measures, Architect.*




First Floor Plan.

The Second, Third & Fourth Floors. are similar to this.




Ground Floor Plan.

Darryl B. Treasurer
FRIBA
— Architect —

SCALE OF 10 5 0 10 20 30 40 50 FEET

## Metropolitan Borough of St. Marylebone.

# Artizans' Dwellings, John Street Edgware Road.

[*Joseph & Smithem, Architects.*

Cost per room, £88 13*s.* 6*d.* Cost per foot cube, $8\frac{3}{5}d.$ Rentals:—one-room tenement, 3*s.* 6*d.* to 4*s.* per week; two-room, 6*s.* to 7*s.*; three-room, 8*s.* 6*d.* to 9*s.* 6*d.*

# METROPOLITAN BOROUGH OF CHELSEA.

## INDUSTRIAL DWELLINGS, BEAUFORT STREET SITE.

THIS scheme of self-contained tenements consists of five ranges of buildings six stories in height, including half basement, having forecourts with planted slope in front, comprising eleven blocks containing three varieties of plan, each tenement having its own scullery, w.c. and open balcony. The buildings provide for 262 tenements, containing 583 habitable rooms, exclusive of sculleries. These rooms house over 1,000 persons.

All the rooms are 8 ft. 6 in. high in the clear, and are so planned as to afford through ventilation, the back-to-back principle being strictly avoided.

Every window lighting a habitable room either looks directly into a spacious playground or roadway 40 ft. wide.

The lowest floor of all the blocks is arranged as a half basement, *i.e.*, sunk about 4 ft. below the surface of the street, but the rooms on this floor are as well lighted and ventilated as those on the upper floors; they look either directly into the playground or into the areas, both of which are sunk to the low level, the glass of the basement windows being wholly above the street level in every case, and making practically two ground floors.

The front rooms of these tenements have the additional advantage of looking out upon the slope, which is planted with shrubs and flowers.

The following schedule will show the areas of the tenements, and it will be seen that an effort has been made to afford the maximum area for living-rooms and bedrooms, though there is no increase in the cost of each tenement, the economy being effected by the fact that there is no space wasted in staircases or landings.

*Thoee-room tenements:—*

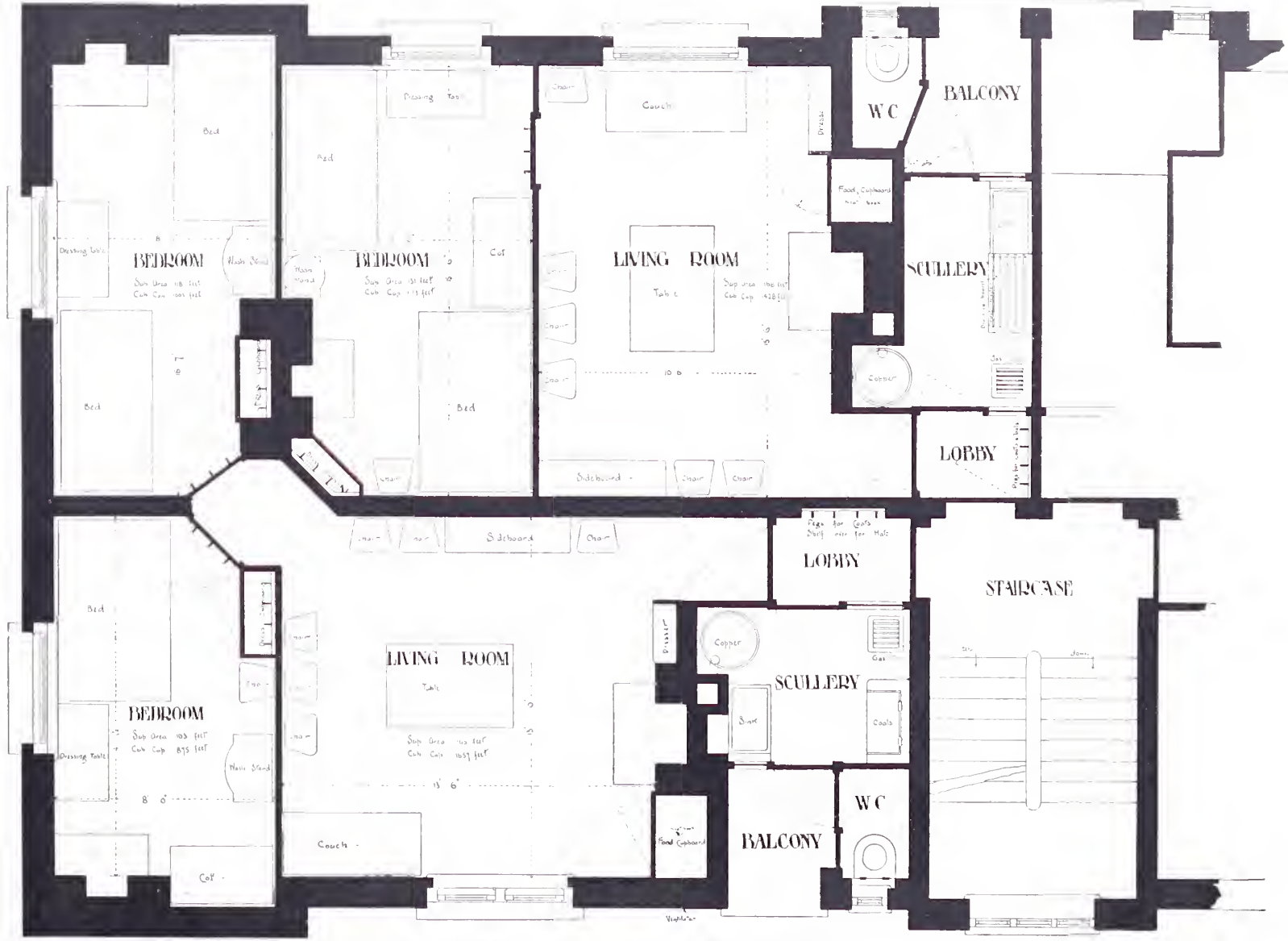
| | | | |
|---|---|---|---|
| Living-room (including lobby, etc.) ... ... ... | 203 | superficial | feet. |
| Bedroom No. 1 ... ... ... ... ... ... | 142 | ,, | ,, |
| Bedroom No. 2 ... ... ... ... ... ... | 123 | ,, | ,, |
| Scullery, balcony, and w.c. ... ... ... ... | 70 | ,, | ,, |
| Making a total of ... ... | 538 | ,, | ,, |

*Two-room tenements:—*

| | | | |
|---|---|---|---|
| Living-room (including lobby, etc.) ... ... ... | 173 | ,, | ,, |
| Bedroom ... ... ... ... ... ... ... | 138 | ,, | ,, |
| Scullery, balcony and w.c.... ... ... ... ... | 69 | ,, | ,, |
| Making a total of ... ... | 380 | ,, | ,, |

*Single-room tenements:—*

| | | | |
|---|---|---|---|
| The room ... ... ... ... ... ... ... | 175 | ,, | ,, |
| Scullery, balcony and w.c. ... ... ... .. | 64 | ,, | ,, |
| Making a total of ... ... | 239 | superficial | feet. |




: SELF-CONTAINED TWO AND THREE ROOM TENEMENTS :

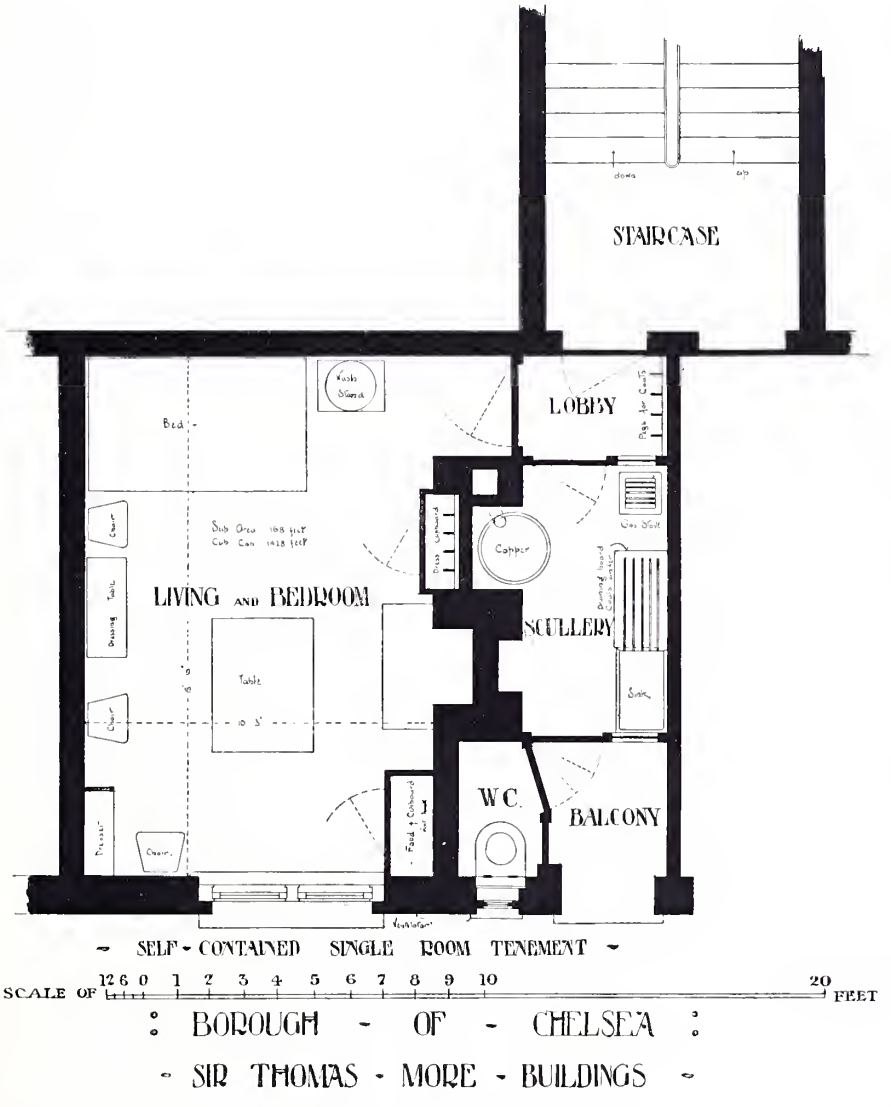
SCALE OF 12 6 0 1 2 3 4 5 6 7 8 9 10 20 FEET

: BOROUGH - OF - CHELSEA :

- SIR THOMAS - MORE - BUILDINGS -

In addition to the balconies above referred to, a special drying room is provided in the basement of one of the rear blocks, such drying room being kept constantly at a high temperature by coils of hot-water pipes in connection with the boiler supplying the baths.

Adjoining the drying room is a hot-water room where the tenants can obtain a supply of boiling water to enable them to prepare their beverages for breakfast or tea without the necessity of lighting their own fires. Five kettles are provided in this room, supplied with hot water from the same boiler which provides the heating for the drying room and baths, and the water in the kettles is kept at actual boiling point at meal time by gas jets under the kettles. At all other times, by day and night, there will be a hot-water supply, though not actually at boiling point.




In the basement of the same block eight bath-rooms have been provided, fitted with white glazed stoneware baths of the strongest description, fitted with hot and cold water supply.

Each living-room (which is entered from a lobby, securing privacy and affording space for hanging up coats, etc.) is provided with a cupboard for the storage of food, ventilated directly into the open air.

A dresser with cup-hooks thereon is also provided.

Each living-room has a self-setting close range to avoid smoky chimneys, with an iron mantel surrounding the range.

A dress cupboard is provided for every bedroom, with shelves and clothes-pegs.

Each bedroom has a fireplace fitted with a register stove.

In each scullery a washing trough and independent copper are provided, and, in addition, a coal-bunk and small gas cooking-range. The latter is a great convenience, as it enables the tenant to cook during the summer months without lighting a fire in the living-room. The gas is laid on to these stoves by the Gas Company on the "penny-in-the-slot" principle, whereby no liability is incurred by the Borough Council.

Clothes can be dried upon lines which are fixed across the outside balconies.

The w.c.'s are entered from an open balcony in every case, and are fitted with independent wash-down closets of the strongest description.

The design is of the simplest character, to avoid undue cost both in construction and maintenance, effect being chiefly obtained by the variety and treatment of the windows and in the broken sky-lines. A feature has been made of the necessity for thickening the walls of the two lowest floors by putting the extra $4\frac{1}{2}$ in. thickness on the outside, thus forming a base to the buildings.

The elevation is faced with red facings relieved by artificial stone dressings, the entrance doorways being constructed entirely of the latter material; they are certainly an architectural feature of the elevation.

The roofs are covered with slates; the floors are fire-proof throughout, being constructed of steel and concrete with floor boards laid direct thereon, with the exception of the lower ground floor, which is of wood block flooring laid upon concrete.

All the partitions are constructed of fire-proof material $2\frac{1}{2}$ in. thick, finished with a smooth face to resemble the plastered brick walls.

All stairs and landings are composed of granolithic material. The balconies, sculleries, hearths, playgrounds and areas are finished with the same material.

The walls of all the rooms are covered with plaster finished with distemper. A dado is formed of white glazed tiling on all the staircases, landings and w.c.'s, and the walls above dado are covered with plaster.

A sanitary dust-pail, similar to that used by the London County Council, is provided for each tenement and kept upon the outside balcony, so that no smell can penetrate into the tenement.

A range of perambulator and cycle sheds, abutting upon the south boundary of the site, is provided.

The undertaking is entirely self-supporting, the tenements are replete with every comfort and convenience, and it is not too much to say that they represent the professional experience of a life-time. These blocks of buildings are the latest achievements of Messrs. Joseph & Smithem, architects, of 8, Queen Street, Cheapside, London, who have shown much skill and ability in this class of work, and the Borough Council of Chelsea may well feel satisfied with so gratifying a result.

| Accommodation. | Chelsea Borough Council, Beaufort Street. (Self-contained.) |
|---|---|
| 1-room tenements | 37 |
| 2-room tenements | 130 |
| 3-room tenements | 94 |
| 4-room tenements | 1 |
| | (Superintendent's quarters.) |
| | 262 |
| Number of rooms | 583 |
| Number of sculleries | 262 |
| **Cost of Sites and Buildings.** | |
| Cost of site | £12,500 |
| Cost of buildings | 51,700 |
| Total Cost | £64,200 |
| Area of site | 70,200 sq. ft. |
| Cost of land per foot super. | 3s. 6d. |
| Cost of buildings per foot cube | 8·60d. |
| Cost per room (not counting Scullery as a room) including cost of land | £110 2 6 |
| Cost per room (not counting Scullery as a room) excluding cost of land | £88 13 6 |
| Cost of land per room (not counting Scullery as a room) | £21 9 0 |

# METROPOLITAN BOROUGH OF BERMONDSEY.

## THE LONDON (FULFORD STREET AND BRADDON STREET, ROTHERHITHE) IMPROVEMENT SCHEME, 1896.

This scheme was projected by the Rotherhithe Vestry in 1899.

Subsequently, this Vestry was included in the borough of Bermondsey, and the Housing Committee of that Council in 1902 arranged an open competition for designs for dwellings on the Fulford Street area.

Messrs. Brocklesby, A.R.I.B.A., Marchment and East, were placed first by the assessor, Mr. John Slater, B.A., Vice-President Royal Institute of British Architects.

In February, 1903, instructions were given to them for the preparation of working drawings, etc., and a tender of £41,000, being £1,800 below the competitive estimate of the architects, was accepted. The first block was opened to tenants on 21st, and the second on the 28th January, 1905; all the tenements were taken up within a fortnight, amply justifying this housing effort. There are 235 tenements, composed of one, two, and three rooms respectively. The blocks of dwellings are placed parallel to the shorter side of the site. By this means four blocks are conveniently built, allowing a good angle of light to every room and especially giving an uninterrupted current of air between the blocks.

The outer blocks are set back from the pavement 2 ft. from the projecting bays, and have iron railings in front.

The main fronts of the inner blocks face each other, being separated by a strip of land 55 ft. average width. This is laid out as a paved garden and planted with trees having seats around them. Strips 5 ft. wide are railed off in front of each block and planted with shrubs.

The aim of the architects has been to provide dwellings at a cost which will enable them to be self-supporting, to be real homes for the working classes, and conduce—

(*a*) To their health;

(*b*) To their convenience and economy of living;

(*c*) To their happiness and

(*d*) Remove facilities for wrong-doing.

After careful consideration a balcony system of planning was adopted in preference to the internal staircase type; it was found to be much cheaper, and afforded more convenient access to the tenements. It also lends itself to more direct and squarer planning—better ventilation and convenient grouping and isolation of w.c.'s and sculleries.

Direct cross-ventilation from the front of the building to the back is given to every living-room and most of the bedrooms. In obtaining this cross-ventilation care has been taken to keep that of the sculleries and w.c.'s quite separate from that of the habitable rooms. In no case is a living-room entered through a scullery. A height of 6 ft. 8 in. from floor to ceiling has been given to all rooms.

In lighting the habitable rooms it should be pointed out that no windows are overlooked from the balconies, but each has uninterrupted light.

A portable trolley on which the tenants place their pails is provided; the dust man wheels the trolley to the dust-collecting van in the street, and the pails are emptied there. This saves any dust being emptied in the yard; the method has been found to answer most satisfactorily, and prevents the balconies from being littered with refuse.

[*Brocklesby, Marchment & East, Architects.*

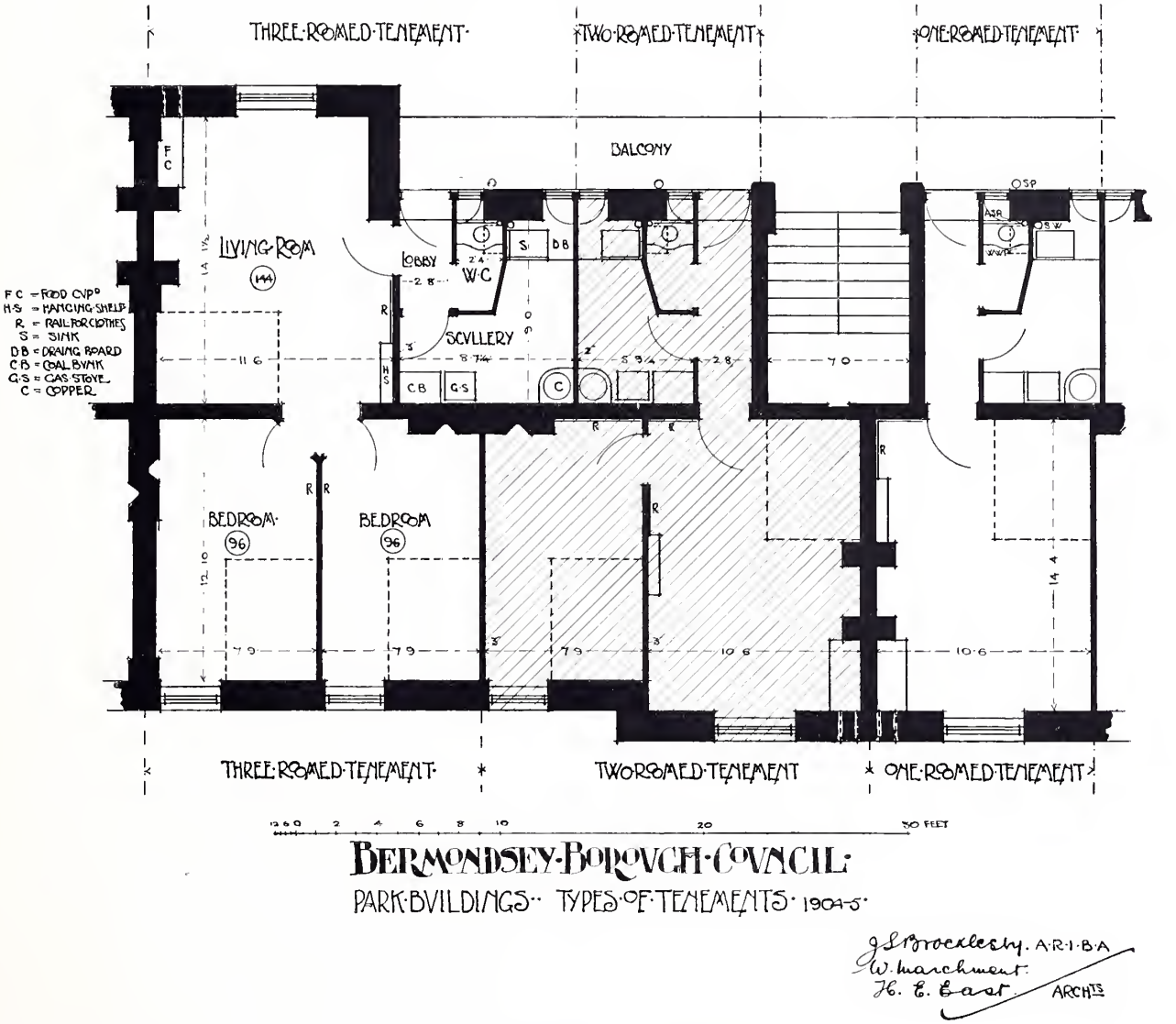
Cost per room, £87⅔. Cost per cube foot, 8·6*d*. Rentals :—one-room tenement, 3*s*. 6*d*. per week ; two-room tenement, 5*s*. 6*d*. per week ; three-room tenement, 7*s*. 6*d*. per week.

The staircases are entered from the yards, saving them from becoming frequented by loafers, or from being publicly used, on occasion, as shelter from rain.

The allowance of one room to each two persons makes it necessary that the living-room should generally be used as a bedroom as well, if moral sleeping facilities are to be arranged for, and it has been a *sine quâ non* to provide space for a double bed, so as to be as much out of the way as possible.

A doubly ventilated food cupboard, 3 ft. 6 in. by 1 ft., is fitted to each living-room.

The bed in the living-room is ever a great inconvenience during the day-time, and apt to quickly become dirty—almost unavoidably. To improve this, it is suggested that a collapsible




**BERMONDSEY BOROUGH COUNCIL.**

PARK BUILDINGS. TYPES OF TENEMENTS. 1904-5.

J. S. Brocklesby. A.R.I.B.A.
W. Marchment.
H. E. East. ARCHTS.

bed, which could be purchased cheaply by the tenants, should be adopted. This is quite experimental.

A feature in these designs is that some of the bedrooms are entered direct from the lobby and not from the living-room. The entrances to the various tenements are kept apart, and the balconies form a cover and protect them from the wet. Every scullery is entered from the lobby and not direct from the living-room. A coal box capable of containing 2 cwt. is fixed in the scullery, and the top forms a convenient table.

A gas stove is fitted near the coal box; a special portable copper, which fits in the angle of the wall, and a deep sink, usable for washing clothes, with draining board, are also provided.

The walls around the staircase for a height of 5 ft., and to the balconies for a height of 3 ft. 6 in.,

have a dado of salt-glazed bricks. The Mansard roof entirely contains the top story, effecting a large saving of brickwork, and giving finish to the elevations. The 3 in. and 2 in. partitions are constructed of coke-breeze cement concrete consolidated between shuttering. This material forms excellent partitions of a minimum thickness; it has been used extensively and has always proved most satisfactory.

Reckoning two persons to each habitable room, accommodation for 980 persons is provided.

In 25 1-room tenements (10·6 per cent.).
165 2-room ,, (70·2 ,, ).
45 3-room ,, (19·2 ,, ).

The inclusive rents of the tenements are as follows:—

| | | | | s. | d. | |
|---|---|---|---|---|---|---|
| 1-room tenement, with separate scullery, w.c., etc. ... ... ... | | | | 3 | 6 | per week. |
| 2-room | ,, | ,, | ,, top floor ... .. ... | 5 | 6 | ,, |
| ,, | ,, | ,, | ,, 1st, 2nd, and 3rd floors ... | 5 | 9 | ,, |
| ,, | ,, | ,, | ,, ground floor ... ... ... | 6 | 0 | ,, |
| 3-room | ,, | ,, | ,, top floor ... ... ... | 7 | 6 | ,, |
| ,, | ,, | ,, | ,, 1st, 2nd, and 3rd floors ... | 7 | 9 | ,, |
| ,, | ,, | ,, | ,, ground floor ... ... ... | 8 | 0 | ,, |

The cost of the buildings is 8·6*d.* per foot cube.

This successful undertaking of the Bermondsey Borough Council will no doubt be a great incentive to future undertakings, and in this scheme the architects have shown a thorough knowledge of work of this character.

## Financial Particulars.

The estimated outlay on buildings is £43,000; land £2,800, the building value being taken as borrowed for 60 years, the land value 80 years, and interest being charged at the rate of $3\frac{3}{4}$ per cent. per annum on the amount of loan outstanding.

| | 25 one-room tenements, with separate scullery, w.c., etc. | 165 two-room tenements, with separate scullery, w.c., etc. | 45 three-room tenements, with separate scullery, w.c., etc. |
|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. |
| Instalment and Interest | 4 10 $3\frac{1}{2}$ | 6 14 9 | 8 19 $2\frac{1}{2}$ |
| Rates and Taxes ... | 2 5 10 | 3 12 $11\frac{1}{4}$ | 4 11 7 |
| Water, Electric Light, and Insurance ... | 0 6 6 | 0 13 0 | 0 19 6 |
| Losses ... ... | 0 9 $3\frac{1}{2}$ | 0 14 6 | 0 18 6 |
| Superintendence and Collection of Rents | 0 4 $10\frac{1}{2}$ | 0 9 9 | 0 14 $7\frac{1}{2}$ |
| Repairs ... ... | 1 4 1 | 2 8 2 | 3 12 3 |
| | £9 0 $10\frac{1}{2}$ = 3*s.* 6*d.* a week rent. | £14 13 $1\frac{1}{4}$ = 5*s.* 8*d.* a week rent. | £19 15 8 = 7*s.* 8*d.* a week rent. |

If the above rents are charged, and the full amount recovered each week, the total income will be £3,554 15*s.* 0*d.*

The estimated gross outgoings are as under:—

| | £ | s. | d. |
|---|---|---|---|
| Instalment and Interest ... ... ... ... ... ... | 1,624 | 10 | 2 |
| Rates and Taxes ... ... ... ... ... ... ... | 964 | 9 | 8 |
| Water, Electric Light, and Insurance ... ... ... ... | 159 | 5 | 0 |
| Superintendence, etc. ... ... ... ... ... ... | 119 | 12 | 0 |
| Repairs ... .. ... ... ... ... ... ... | 590 | 0 | 0 |
| | £3,457 | 16 | 10 |
| Leaving a small amount for contingencies of ... ... ... | 96 | 18 | 2 |
| | £3,554 | 15 | 0 |

# ROWTON HOUSES, LIMITED.

CAPITAL, £350,000.

*Directors.*

SIR RICHARD FARRANT (Chairman).
THE HON. CECIL ASHLEY.
WILLIAM MORRIS, Junr., Esq.

*Surveyor:* MR. G. J. EARLE. *Secretary:* MR. W. T. DULAKE.

THE Rowton Houses, so well known as the "Poor Men's Hotels," provide accommodation for about five thousand men, and the management of these places is so excellent that for sixpence a night conveniences and comforts really astonishing and little dreamt of are to be found at any of the six houses belonging to this Company. Indeed, it is thought by the writer that these Hotels, which bear the name of the founder, the late Lord Rowton, are such an important factor in the life of London and make such a valuable contribution towards solving the housing problem, that no work dealing with the subject of housing would be complete without a chapter of the work being devoted to these undertakings. It is interesting to note that the present Chairman, Sir Richard Farrant, collaborated with Lord Rowton from the inception of the idea to provide something of a superior character to the ordinary lodging-houses.

The *Cornhill Magazine* for June, 1904, gives a very interesting account of Lord Rowton and Rowton Houses from the pen of Sir Richard Farrant, and the following will be of interest:—

"It has been thought by friends of the late Lord Rowton that it would be a matter of general interest to have some record of the initiation of the remarkably successful philanthropic enterprise now known as Rowton Houses, Limited. As the active coadjutor of Lord Rowton in this work, I have been asked to supply such details as I can in connection with the movement.

"About fourteen years ago, Sir Edward Guinness (now Lord Iveagh) asked his friend, Lord Rowton, to advise and help him in the formation of the then projected Guinness Trust. This Trust had for its object the provision, in London and Dublin, on a large scale, of dwellings for the artisan class at, if possible, lower rates than those generally charged. In order to inform themselves as to the rents charged and the accommodation then available, and to become conversant with the general conditions of the life of the working people of London earning a minimum wage, they made exhaustive inquiries in the East End of London. Common lodging-houses of all classes came under their notice.

"The dirty and crowded sleeping-rooms, the miserable arrangements for washing and sanitation, the dark, unhealthy kitchens, usually underground, and the general air of squalor so impressed Lord Rowton that he began to consider whether it was not possible to devise some means for their amelioration. Something better than the common lodging-house was urgently needed by those men who could not occupy the rooms which were to be provided by the Guinness Trust or had been provided by other institutions.

"One day, in reply to a question from him as to the cost of such an undertaking, I told him that, provided a suitable site could be found, a lodging-house, such as we had conceived, would cost something between £20,000 and £30,000. After some consideration Lord Rowton said, 'I should not mind that.' I then said, 'Very well; will you find all the money?' 'Yes,' he replied; and I then said, 'I will do the best I can to help you carry out the scheme.'

"We had started with the idea of improving the common lodging-houses of London; as the building grew we came to the conclusion that what was wanted was an entirely new class of accommodation—namely, a cheap hotel, where the poorer class of working men could live and enjoy every possible convenience, with separate bedroom accommodation for each man and comfortable rooms for eating and recreation.

ROWTON HOUSE, CAMDEN TOWN, LONDON.

[*By permission of the Directors of Rowton Houses, Ltd.*

Cost per cube foot, 11*d*. Charge for accommodation, 6*d*. per night per person.

"In order to determine the best construction of our cubicle, a model cubicle was erected at the works, and Lord Rowton brought a number of his lady friends to advise him on the subject of furniture, and even took one of the bedsteads to sleep on at his house in Berkeley Square before finally deciding as to their exact dimensions. Every cubicle had its own window under the control of the occupant. The size of the sheets, blankets, etc., were decided by Lord Rowton, after long discussion with Lady Farrant, and have not since been altered. No detail was too small for Lord Rowton to attend to personally, and very little escaped his notice; the exact size, shape, and position of the tables and chairs in the dining-room, and the best possible material for their construction, were only decided after mature deliberation and careful selection from various patterns.

"The Vauxhall Rowton House was opened on December 31st, 1892. It contained 470 cubicles, subsequently increased to 475. Within a short time of the opening of the house it was practically filled, and the experiment turned out a complete success—it proved, in fact, to be a thoroughly useful undertaking, and consequently one that should be developed.

"Lord Rowton showed by his own courage and benevolence that it is possible to provide cheap hotel accommodation for the very poor man, and that such accommodation can be the object of a successful commercial enterprise.

"Lord Rowton's almost affectionate interest in every detail led him to spend much time in the inspection of the various houses.

"The Rowton Houses are a credit to London in appearance, and they have withstood in every way the criticism of experts in the building trade. In fact, I doubt whether buildings of equal character could have been put up in such a satisfactory manner under any other system.

"At the present time the capital of the Company expended in its five houses amounts to about £300,000. The gross income amounts to over £1,000 a week—about £700 from beds and £300 from the catering department. From the catering there is practically no profit, but the net income arising from the beds is sufficient to pay the dividend. More than this is not required by the directors, and they are able, therefore, to supply the residents with food at about cost price.

"From almost every capital in Europe inquiries have been made as to the Rowton House scheme. Many of the large provincial towns have houses more or less after the design of the London houses.

"His colleagues have undiminished faith in the enterprise, and will endeavour to make Rowton Houses an institution which will be the greatest and most enduring memorial of one of the best men of our time."

The example at Camden Town illustrated is the sixth of the series of Rowton Houses. The first, situated at Vauxhall, opened in 1893, has 475 cubicles; the second, in King's Cross Road, opened in 1895, has 677 cubicles; the third, at Newington Butts, opened in 1897, has 1,016 cubicles; the fourth, at Hammersmith, has 800 cubicles; the fifth, at Whitechapel, has 816 cubicles, and the present building is planned for 1,100 cubicles. The Camden Town building is situate just off the High Street, and has its entrance frontage in Arlington Road. The building is set back a distance of 5 ft. 6 in. from forecourt line in front, and is planned with wide areas around other sides of site, and two large inner courtyards, to procure an abundance of light and air. The upper or cubicle floors are planned in this form with a staircase at the extremity of each arm and also at the front left angle. Advantage has been taken of the large area of site to place all the day rooms used by lodgers (with the exception of reading and writing rooms) on the Ground Floor.

The elevations have been erected in pressed Leicester facing bricks, relieved with Fletton bricks, and dressings of buff Ruabon terra-cotta. The whole of the interior walling, excepting where glazed bricks are used, is built with pressed bricks. All brickwork throughout the building has been built in Portland cement mortar. The roofs to front elevation and staircase turrets and gables are covered with green slates, nailed direct upon coke-breeze concrete slabs, carried upon steel construction. All the other roofs are flat, concrete and steel construction covered with asphalte. The ground floor of site is covered with a thick bed of concrete upon which, where wooden floors are laid, are solid oak wood blocks, and to other floors cement and granite chippings. The floors are fireproof throughout, formed of concrete and steel, and the staircases and landings are in

Portland cement concrete finished in granolithics. To avoid a cavity between surface of concrete and flooring, the floor boards are nailed directly upon the concrete cubicle floors.

*Hydrants.*—A full-size hydrant service is installed all over house, with twenty-seven cocks in all.

The building is divided for administrative purposes into five sections:—

No. 1.—Superintendent's apartment, with separate accommodation for office clerk. No. 2.—Bedmakers. No. 3.—Catering section, which includes sleeping accommodation for females employed in shop, kitchen and scullery. No. 4.—Lodgers' day rooms. No. 5.—Lodgers' cubicles.

The sections 1, 2 and 3 are planned so that there is no communication whatever between them and the lodgers' sections 3 and 4, except by passing in view of the clerk's office at the entrance on ground floor.

Superintendent's quarters comprise a self-contained residence, with a front entrance door next to the entrance door of office, and has the following accommodation: two sitting-rooms, bedroom, bath-room, lavatory and w.c.; the office, which is immediately to the left, inside entrance doors, will be occupied by a clerk, who will be in charge of the turnstiles, books, etc., and has a bedroom adjoining.

Women will be employed as bedmakers; they will be day servants and will not sleep in the building. The section to be used by them is approached by private gates at foot of stairs, facing front entrance, with a separate staircase giving access to their rooms on ground floor and the cubicle floors; this staircase is a provision to enable the bedmakers to reach the cubicle floors without passing through any portion of day rooms or corridors used by lodgers, the whole of the cubicle floors being closed against lodgers after a specified time in the morning, by the closing of gates on the lodgers' four staircases; the sitting-room for the women is at the foot of the before-mentioned staircase on ground floor; it is also intended as a dining-room, and is fitted with range. A lavatory and w.c. is provided adjoining. In the soiled linen room section and adjoining the bedmakers' rooms is the receptacle for soiled bedding, etc.

A room fitted up with open racks, from floor to ceiling, for the storage of linen, blankets, quilts, etc., is provided on ground floor, and is known as the linen and blanket room; it has provision for the sorting and checking of these articles when received from the laundry, and also when sent up clean-bedding lift to cubicle floors for bedmakers. Hot-water pipes are carried from cylinder to this room to air bedding. Separate lifts for clean and soiled linen communicate between these rooms and each cubicle floor.

The catering department is on the ground floor, approached by staircase from Superintendent's section, with sitting-room and bedrooms for the female staff. The accommodation is as follows:—Kitchen, scullery and two larders, service lobby and kitchen for servants, seven bedrooms, bath-room, lavatory and w.c. for the use of female staff employed in the catering department.

There is a lofty main entrance hall in glazed brickwork, with screen doors in polished teak. Oak seats are provided in positions out of the line of traffic in corridors. Water is laid on for drinking purposes in main corridor. Dining-room is on right side in main corridor, with large ventilating top lights into courtyard of building, in addition to large windows. The floor space in this room is 5,719 ft.; seating at tables for 512 men, and a number of extra seats and wooden easy chairs are provided. The tables and seats are in teak, on cast iron standards. Two large cooking ranges, with ovens, hot plates and grills are fitted in arched recesses, out of the line of traffic, and crockery and service are provided at the end of dining-room next to shop. This room is fitted up with stout wood shelving for crockery, cooking utensils, teapots, etc., placed here for the free use of lodgers who wish to prepare their own food, the lodgers' scullery being placed adjoining the dining-room.

A large space on left hand of main corridor has been divided up into six corridors, top lighted and ventilated, and fitted with lockers. The lockers, 1,160 in number, are mostly uniform in size, 3 ft. high by 1 ft. 6 in. deep, and 1 ft. 4 in. wide inside, fitted with shelf and lock; each locker is ventilated and numbered. These are arranged in tiers, each three in height; provision is made in them for sticks and umbrellas. A few lockers for food only are provided, 18 in. every way.

The floor space of the smoking room is 1,815 ft., which will accommodate 128 lodgers.

The reading room is approached from the entrance corridor. The floor space is 3,430 ft. The walls have glazed brick dado with plastering to tint, as in dining-room. Seats provided for 272 men.

A writing room adjoins the reading room with a floor space of 741 ft., and is arranged to seat 48 men. A smoking lounge has been formed on the flat roof over part of dining-room and main corridor, but smoking is allowed in the corridors, and, of course, the smoking and reading room.

The lavatory, on left of main corridor, has 80 washing basins, white enamelled fireclay, fitted with polished slate top, brass taps for hot and cold water to each basin, and towel and hat rails are supplied.

A room adjoining the lavatory is fitted up for the purpose of feet washing, with nine deep feet-washing troughs, teak boards between each, and hot and cold supply carried to each trough.

Of bath-rooms and dressing-rooms there are ten in number, placed on each side of central staircase. They are each fitted up with ivory-glazed fireclay bath, with teak bath top.

There is a lodgers' wash-house at the left of main corridor for the use of lodgers who may wish to wash their own garments; it is fitted with eleven washing troughs in ivory-glazed fireclay, hot and cold water supply to each, draining boards of teak, and a large heating stove surrounded by a galvanised iron framework for the speedy drying of garments. Two rooms are provided and fitted up as workshops for tailoring and shoemaking.

A room is set apart and fitted up with hot and cold water and usual fittings as a complete barber's shop.

A porters' day room, fitted with cooking range, table, lockers, and other fittings, is provided for the officials employed in sections 4 and 5.

The w.c.'s and urinals are placed outside the building in the courtyard, and there are fifty-eight w.c.'s (in addition to those on cubicle floors) placed in two sections, top lighted from end to end, and top louvre ventilated.

There are also eighteen urinals fitted with complete automatic flushing apparatus in a building placed between the two w.c. sections. A fumigating room is provided outside the building, also a mortuary, and the waste heat from the furnace is utilised for a drying room.

The cubicles are approached by four fireproof staircases, built in ivory and cream glazed brickwork. The disposition of the staircases renders it an impossibility for the lodgers to be trapped by fire, in the event of an outbreak, as the cubicle corridors run from staircase to staircase, thereby leaving open a way for retreat in the event of exit by either staircase being cut off. In addition, each floor is divided into sixteen sections by walls, which would check, if not stop, the progress of a fire horizontally. The sectioning of floors also renders complete isolation and efficient fumigation possible in the event of contagious disease.

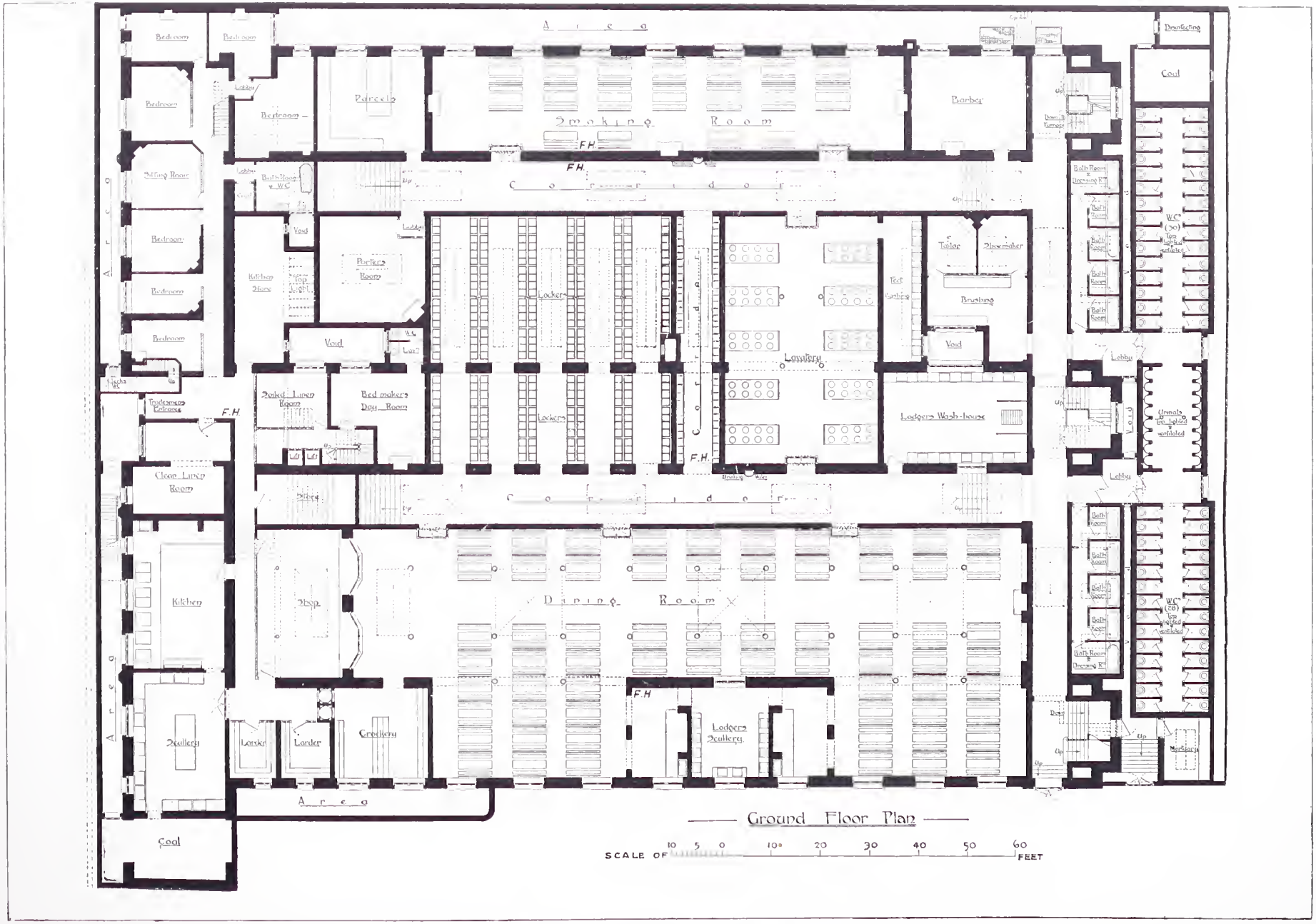
There are five floors of cubicles, with a total sleeping accommodation for 1,100 men; each bed is in a separate cubicle, and every cubicle in the building has a window under the control of the occupant. The portion of the cubicle partition next corridor is 6 ft. 6 in. high, while the divisions between the cubicles are 7 ft. 6 in., leaving the space up to ceiling level free for ventilation. The bedsteads will be of iron, each fitted with wire-woven mattress, horsehair mattress and bolster, blankets, sheets and quilt, and each cubicle will be furnished with chair, shelf, clothes hooks and utensil. On the entrance floor there have been arranged eighty-four superior cubicles or bedrooms 6 ft. 8 in. wide instead of 5 ft., glazed up to ceiling, and provided with a chest of drawers and washstand in addition to other articles. It is proposed to let these rooms weekly at a higher rent.

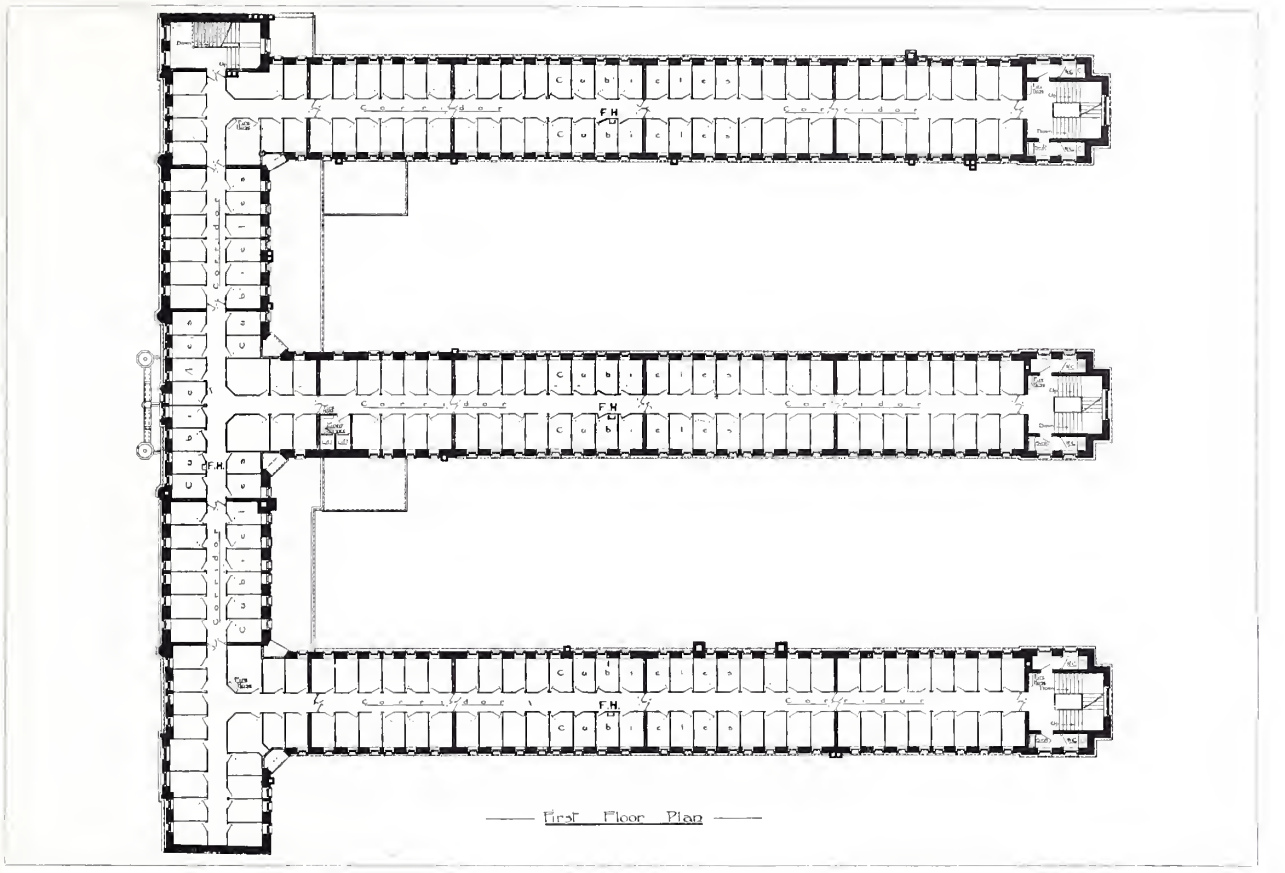
Two w.c.'s and a sink with cold water drinking supply are placed on each of the staircase landings at ends of wings outside entrance to cubicles, thus providing w.c.'s and sinks on each floor for night use.

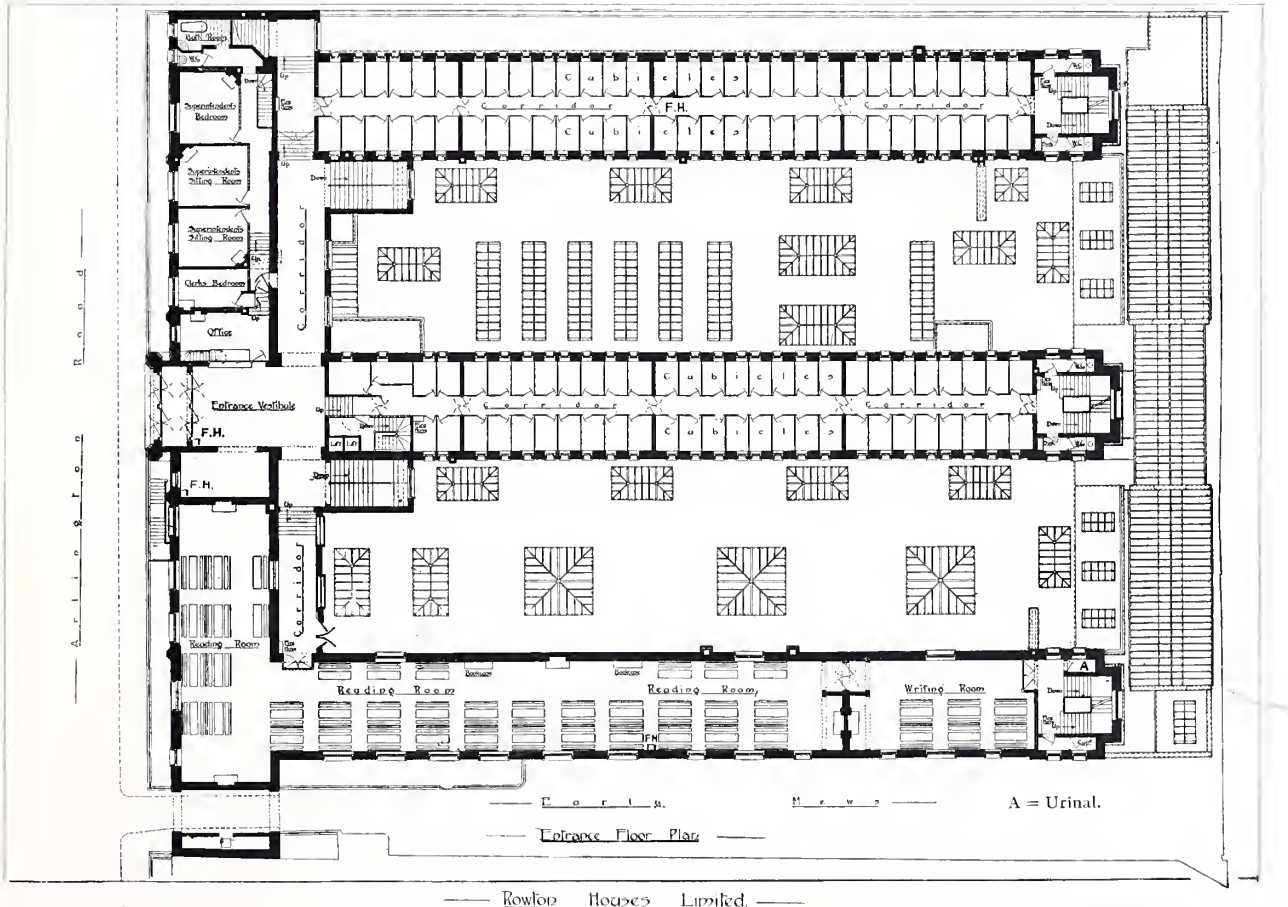
The charge for a cubicle, with use of day rooms and lavatories and other conveniences, is at the rate of 3*s.* 6*d.* per week of seven nights, and complete arrangements are made for the sale of cooked or uncooked foods or for the sale of foods to those lodgers who prefer to cook their own. The catering is carried out by the Company. The tariff is as follows:—Tea, coffee, or cocoa, from ½*d.* per cup; soups from 1*d.* per basin; joints from 3*d.* per plate, puddings from 1*d.* each; etc., etc.

The cost of building these houses is about 11*d.* per ft. cube. The Rowton Houses, Limited, do their own building, buying materials direct from makers, and employing labour under efficient foremen; they have their own riverside premises, with saw mills and joinery works.

Mr. Harry B. Measures, F.R.I.B.A., now appointed Director of the Barracks Commission at the War Office, was architect for most of the Rowton Houses.


Bedroom
Bedroom
Bedroom
Bedroom
Sitting Room
Bedroom
Bedroom
Bedroom
Area
Area
Area
Area
Lobby
Bedroom
Parcels
Smoking Room
Barber
F.H.
F.H.
Corridor
Bath Room & W.C.
Void
Kitchen Stairs
Top Light
Porters Room
Ladder
Lockers
Lockers
Corridor
Corridor
Tailor
Shoemaker
Brushing
Void
Lavatory
Lodgers Wash-house
Void
Lobby
Urinals (10) lighted & ventilated
Lobby
Void
Bath Room
Bath Room
Bath Room
Bath Room
Bath Room & Dressing R.
Bath Room
Bath Room
Bath Room
Bath Room
Bath Room & Dressing R.
W.C.s (30) Top lighted & ventilated
W.C.s (28) Top lighted & ventilated
Mortuary
Disinfecting
Coal
Down to Garage
Up
Up
Up




F.H. = Fire Hose Cupboard.

*By permission of the Directors of Rowton Houses, Ltd.*

NOTE.—The cubicles shown on the Entrance Floor Plan have been enlarged to 6 ft. 8 in. wide, and glazed up to ceiling; to be let to weekly lodgers, reducing the number by twenty-four.

ROWTON HOUSE, BIRMINGHAM.

[*Harry B. Measures, F.R.I.B.A., Architect.*

Charge for accommodation, 6*d.* per night per person.

# ROWTON HOUSE, BIRMINGHAM.

THE Rowton House, Highgate Park, the foundation stone of which was laid by her Royal Highness Princess Christian of Schleswig-Holstein on the 23rd of June, 1903, is the first of the "Poor Men's Hotels." It was erected in Birmingham by the Birmingham Rowton Houses, Limited, from the designs and under the supervision of Mr. Harry B. Measures, F.R.I.B.A., of Westminster, the architect of the Rowton Houses in London.

The building is situate upon an exceptionally fine site, comprising about an acre of freehold land, overlooking Highgate Park, in the midst of that part of Birmingham mostly occupied by the class to whom it is believed the accommodation provided will supply a long-felt need.

The site is in the form of a parallelogram; the entrance frontage is to Alcester Street.

The elevations are of Ruabon red facing bricks, with dressings of buff terra-cotta, and, in addition, light red Fletton bricks are used as a relief to the dark red Ruabon bricks. The whole of the interior walling, excepting where glazed bricks are used, is of a specially hard brick. The roofs to front elevations are of green slates nailed direct upon coke breeze concrete slabs, carried upon steel construction; all other roofs are of flat concrete and steel construction, covered with asphalte. The ground floor is covered with a thick bed of concrete, upon which wooden floors of solid oak blocks are laid; the other floors are of cement and granite chippings. The floors are fireproof throughout, formed of concrete and steel, and the staircases and landings of Portland cement concrete. To avoid a cavity between the surface of concrete and flooring, the floorboards are nailed directly upon the concrete cubicle floors.

A system of lighting has been adopted, giving the official control of the gas upon each floor of cubicles; the various rooms on basement and ground floors are controlled separately, and, in addition, the Superintendent has complete control in the meter room over the various sections. Meters are placed on each section, so that any excessive use of the lighting may be traced.

The building is divided for administrative purposes into five sections, and in this respect is like the London houses.

The portion of ground floor approached from Superintendent's section is occupied by the catering department, with sitting rooms and six bedrooms for the female staff, adjoining kitchen along the frontage to Highgate Park, and is entirely cut off from the lodgers' accommodation. Complete arrangements have been made for the sale of cooked foods, and also uncooked foods for those lodgers who prefer to cook their own. The catering is carried out by the Company's staff, supervised by the Superintendent.

The accommodation is as follows:—

*Kitchen:* 30 ft. by 24 ft. Built in ivory-glazed brickwork from floor to ceiling; floor, solid wood blocks, with quarry tiled margin and hearths; fitted up with ranges, gas and steam cooking apparatus, dressers, cupboards, etc.

*Scullery:* 32 ft. by 14 ft. Built in ivory-glazed brickwork from floor to ceiling; fitted up with large teak sinks, teak draining boards, plate racks and dresser.

*Service:* A service room adjoins kitchen and scullery, fitted with double turn-table service into lodgers' scullery.

*Larders:* 12 ft. by 10 ft. each. Built in ivory-glazed brickwork from floor to ceiling, fitted up with slate and wood shelving; rails and hooks for hanging joints, etc., are provided for kitchen and shop respectively.

*Service Corridors:* Service corridors are formed between shop, kitchen, scullery, and larder. All walls are in ivory-glazed brickwork.

*Stores:* A large storeroom, 27 ft. by 12 ft., fitted up with shelving, etc. is set apart for storage of groceries and other goods for catering purposes. Another storeroom in corridor is fitted up for, and stocked with, spare crockery, etc.

*Kitchen Servants:* A corridor, built in ivory-glazed brickwork, gives access to sitting rooms,

six bedrooms, bath-room, lavatory, and w.c., for the use of the female staff employed in the catering department. Cellarage for coals is provided in this section.

On the *Ground Floor* are the entrance and corridors, leading to the various rooms, and the three staircases are built in glazed brickwork from floor to ceiling. Water for drinking purposes is laid on in corridor. The dining-room is on the right side in main corridor, with eight large ventilating top lights into the central courtyard of building, in addition to large windows. The floor space in this room is 6,748 ft.; seating at tables for 448 men, and a number of extra seats and wooden easy chairs are provided. At the end of this room two recesses are formed, 19 ft. by 12 ft. each, with arched openings into same, fitted up with large cooking ranges having ovens, hot plates, and grills, as a provision for lodgers who may desire to prepare their own food.

The *Lodgers' Scullery and Crockery* is placed adjoining the dining-room, and is a provision for lodgers who wish to prepare their own food for cooking out of the dining-room.

The *Shop:* 24 ft. by 18 ft. 6 in., is planned with teak shop front, opening into and giving a view of dining-room. It is lined with glazed tiles from floor to ceiling, fitted up with cupboards, drawers, shelving, sink, gas stove, hot plates and boiling water apparatus, and stocked with goods to meet the various requirements of lodgers. A tobacco licence is held, tobacco, cigarettes and cigars being on sale. A large space, on the left of main corridor adjoining dining-room, has been divided up into thirteen corridors, well lighted and ventilated, fitted with lockers. The lockers, over 800 in number, are uniform in size, 3 ft. high by 1 ft. 6 in. square inside, and are fitted with shelf and lock.

The *Lavatory* is between the two end staircases and is entered from main corridor; it is 36 ft. wide by 44 ft. long. There are 80 lavatory basins, white enamelled fireclay, fitted up with polished slate top, brass taps for hot and cold water supply to each basin; towel and hat rails.

*Bath Rooms:* Eleven in number, arranged at sides of lavatory. They are fitted up with ivory-glazed fireclay bath, with teak bath top, and brass taps for hot and cold water supply.

Two *Dressing Rooms* are provided, approached from lavatory, to enable lodgers to change their garments during the hours access is not permitted to cubicles. A room, approached from lavatory, is fitted up for *Feet Washing*, with ten deep feet-washing troughs, with teak boards between each, and hot and cold supply carried to each trough. The *Lodgers' Washhouse*, at the end of main corridor, is for the use of lodgers who may wish to wash their own garments, and is fitted with eight washing troughs in ivory-glazed fireclay, hot and cold water supply to each, draining boards of teak.

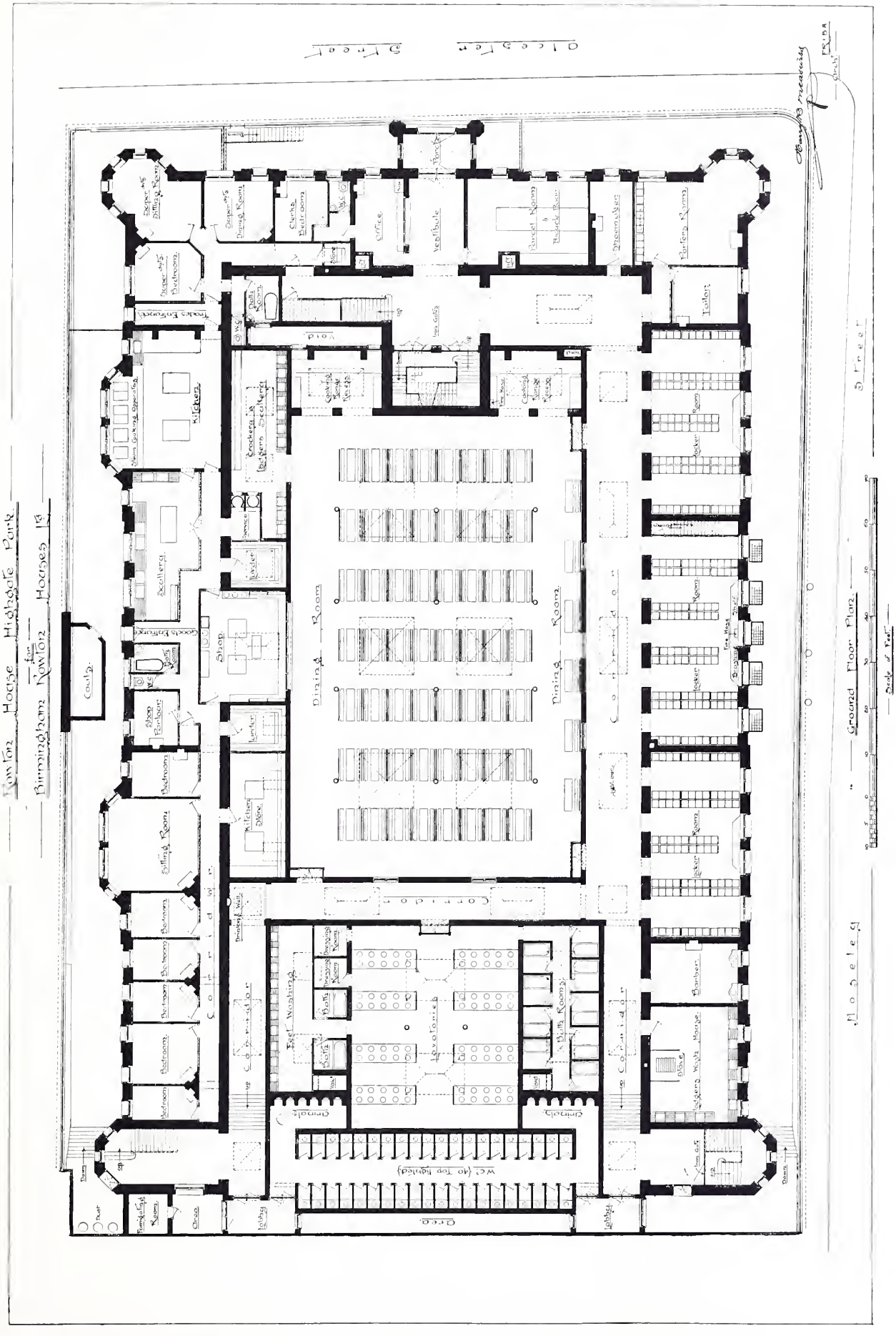
The *w.c.'s and urinals* are placed outside the buildings, in courtyard at south-east of building, and are cut off from same by means of cross-ventilated lobbies.

There are 40 w.c.'s (in addition to those on cubicle floors) placed in one building, top lighted from end to end, and top louvre ventilated. There are 12 urinals in similar, and adjoining, buildings. The urinal backs are semi-circular.

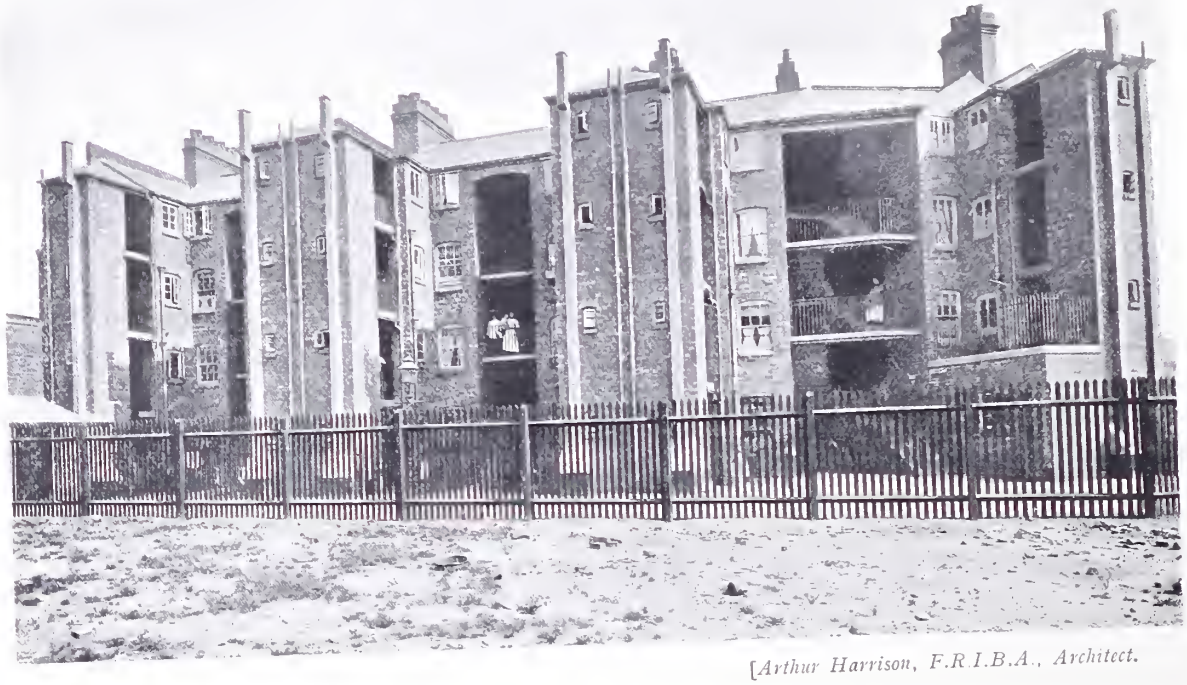
A *Smoking Room* is at eastern end of main corridor on first floor. The floor space is 1,582 ft., the tables and seats teak, as in dining-room, and, as fitted, seat 96 lodgers; in addition, a number of wooden easy chairs will be provided around the two fireplaces, and in a large bay. The mantels and overmantels are of teak and fitted with large open fireplaces. The *Reading Room* is placed on first floor; the floor area is 2,503 ft. The seats and tables, in teak, provide for 160 men, in addition to a number of easy chairs around the three fireplaces and elsewhere. Books will be lent to lodgers on application to Superintendent; two large teak bookcases are provided.

A *Writing Room* adjoins the reading room, built and fitted up in a similar manner.

The cubicles are approached by three fireproof staircases, built in ivory-glazed brickwork, two situated at eastern boundary of site, and one opposite entrance and adjoining office, all at the extreme ends of cubicle corridors. The sectioning of floors permits of isolation, and efficient fumigation in the event of a case of contagious disease. There are five floors of cubicles, with a total sleeping accommodation for 819 men. Each bed is in a separate cubicle, and every cubicle in the building has a window under the control of the occupant. The portion of the cubicle partition next the corridor is 6 ft. 6 in. high, while the divisions between the cubicles are 7 ft. 6 in., leaving the space up to ceiling level free for ventilation.


Common House Highgate Park
for
Birmingham Rowton Houses Ltd
Ground Floor Plan
Scale of Feet
Hopeley
Oliver Street
Dining Room
Dining Room
Corridor
Corridor
Corridor
Corridor
Corridor
Corridor
Lavatories
Baths
Baths
Dressing Room
Dressing Room
Drinking Fountain
Kitchen
Scullery
Shop
Shop Parlour
Kitchen Stores
Cook's Bedroom
Housekeeper's Bedroom
Clerk's Bedroom
Office
Vestibule
Parcel Room
Public Room
Reception Room
Ladies' Waiting Room
Toilet
Gentlemen's Waiting Room
Barber
Bedroom
Sitting Room
Bedroom
Bedroom
Bedroom

# THE COLMORE ESTATE DWELLINGS HOSPITAL STREET, BIRMINGHAM.



[*Arthur Harrison, F.R.I.B.A., Architect.*

Three-room tenement: cost, £145; rental, 5*s.* 9*d.* a week inclusive. Two-room tenement, cost, £115; rental, 4*s.* 9*d.* a week inclusive. The cost per foot cube, $7\frac{1}{4}d.$

# THE COLMORE ESTATE, HOSPITAL STREET, BIRMINGHAM.

Mr. Cregoe Colmore is the owner of large estates in Birmingham, and desiring to do something in a practical manner for the proper housing of Birmingham's working-class population, he has utilised a part of his own property, upon which dwellings have been erected according to the designs of Mr. Arthur Harrison, F.R.I.B.A., architect, of that city.

The cost of the buildings has been kept down as much as possible in order to demonstrate the possibility of providing cheap tenements on commercial lines.

They are not lacking in comfort or convenience, and the tenants enjoy privileges in the way of household accommodation that are not always to be obtained in houses of the same character.

Separate stone staircases have been arranged to lead up to each pair of tenements, so that the balcony idea is dispensed with.

An entrance lobby is provided on each landing, which gives privacy to each tenement.

The rooms are of good size and well ventilated, and every possible space is utilised for cupboards and other conveniences.

An interesting and desirable feature in dwellings of this kind is the provision of a bath for each tenement. This inducement to cleanliness is secured by the use of Cornes & Haighton's combination.

The bath is placed in a little recess formed in the scullery but partly taken out of the living-room.

The cost of the tenements, each of which is self-contained and has its own sanitary conveniences, is for three rooms £145, two rooms £115.

The cost per foot cube is 7¼d.

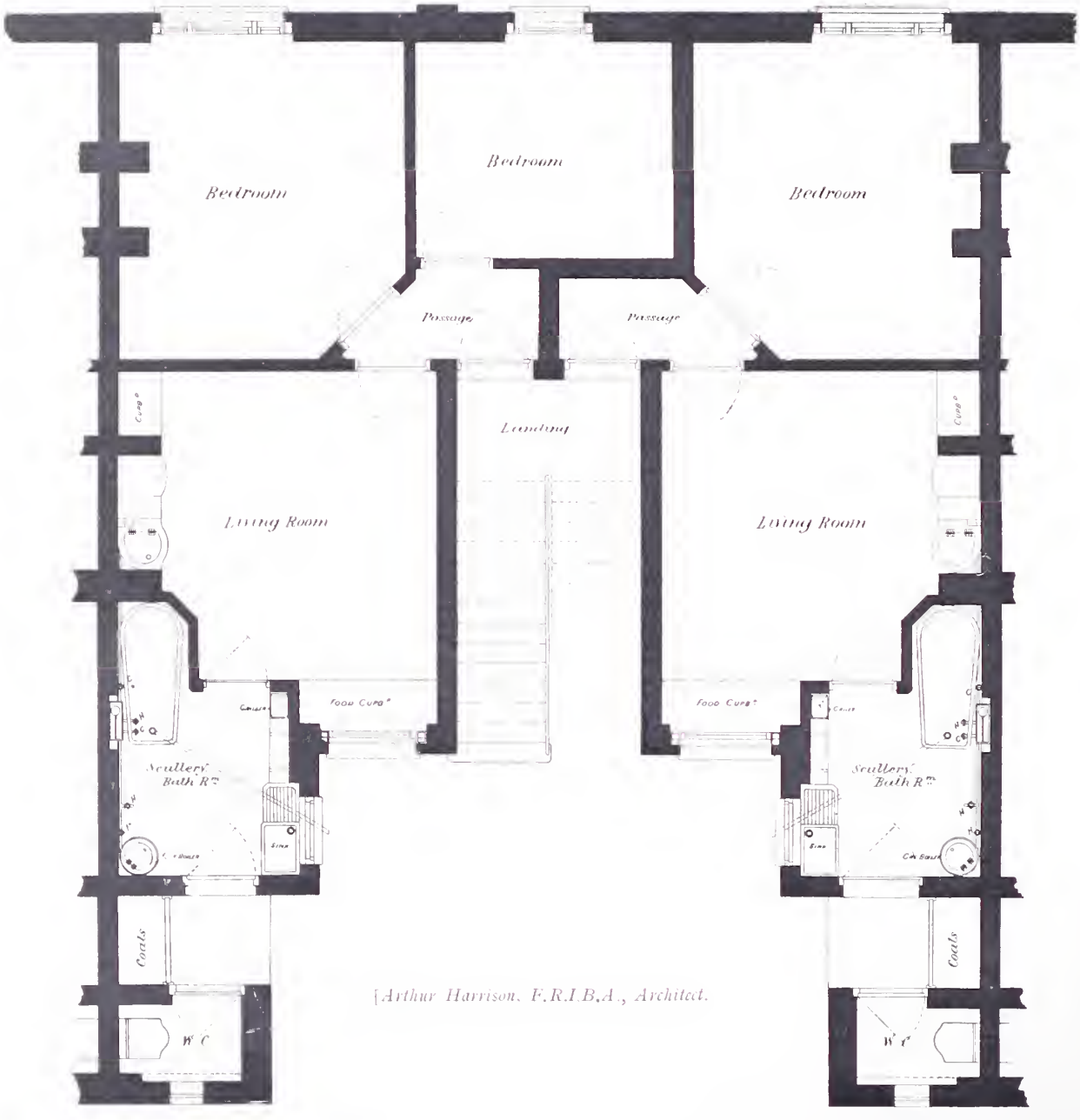
Financial Particulars.

| | £ | s. | d. |
|---|---|---|---|
| *Capital Expenditure* ... ... ... ... ... ... ... ... ... | 4,500 | 0 | 0 |
| *Annual Expenditure—* | £ | s. | d. |
| Interest on £4,500 at 3½ per cent. ... ... ... ... ... ... | 157 | 10 | 0 |
| Repairs, Management, Rates, etc. ... ... ... ... ... .. | 117 | 16 | 0 |
| Ground Rent ... ... ... ... ... ... ... ... ... | 51 | 0 | 0 |
| | £326 | 6 | 0 |
| *Annual Income—* | | | |
| *Ground Floor.* | £ | s. | d. |
| 1 Shop and Tenement (weekly) ... ... ... ... ... ... ... | 0 | 12 | 0 |
| 2 Three-room Tenements (weekly) 6s. ... ... ... ... ... ... | 0 | 12 | 0 |
| 2 Two-room Tenements ,, 5s. ... ... ... ... ... ... ... | 0 | 10 | 0 |
| *First Floor.* | | | |
| 2 Three-room Tenements ,, 6s. ... ... ... ... ... ... ... | 0 | 12 | 0 |
| 4 Two-room Tenements ,, 5s. ... ... ... ... ... ... ... | 1 | 0 | 0 |
| Carried forward ... ... | £3 | 6 | 0 |

*Annual Income—*

| | | | £ | s. | d. |
|---|---|---|---|---|---|
| | | Brought forward ... ... | 3 | 6 | 0 |
| | *Second Floor.* | | | | |
| 2 | Three-room Tenements (weekly) | 5s. 9d. ... ... ... ... ... | 0 | 11 | 6 |
| 4 | Two-room Tenements ,, | 4s. 9d. ... ... ... ... ... | 0 | 19 | 0 |
| | *Third Floor.* | | | | |
| 2 | Three-room Tenements ,, | 5s. 6d. ... ... ... .. .. | 0 | 11 | 0 |
| 4 | Two-room Tenements ,, | 4s. 6d. ... ... ... ... ... | 0 | 18 | 0 |
| | | | £6 | 5 | 6 |

£6 5s. 6d. × 52 = £326 6s. 0d.




[Arthur Harrison, F.R.I.B.A., Architect.

# CITY OF LIVERPOOL.

THE new dwellings are on a site known as the Hornby Street area, which is being acquired by the Corporation as an "unhealthy area" under the powers of "The Housing of the Working Classes Act, 1890." The main street, Hornby Street, is at present thirty-six feet wide, and runs from Vauxhall Road to Scotland Road. The total number of insanitary houses proposed to be acquired is 511, in addition to which there are 23 sanitary houses, making a total of 534. The population of the insanitary houses is 2,431, and by the terms of the Local Government Board's Provisional Orders Confirmation (Housing of the Working Classes) Act, 1902, which received the Royal Assent on the 22nd July, 1902, the Corporation are required to provide accommodation on the area for the number of persons dispossessed.

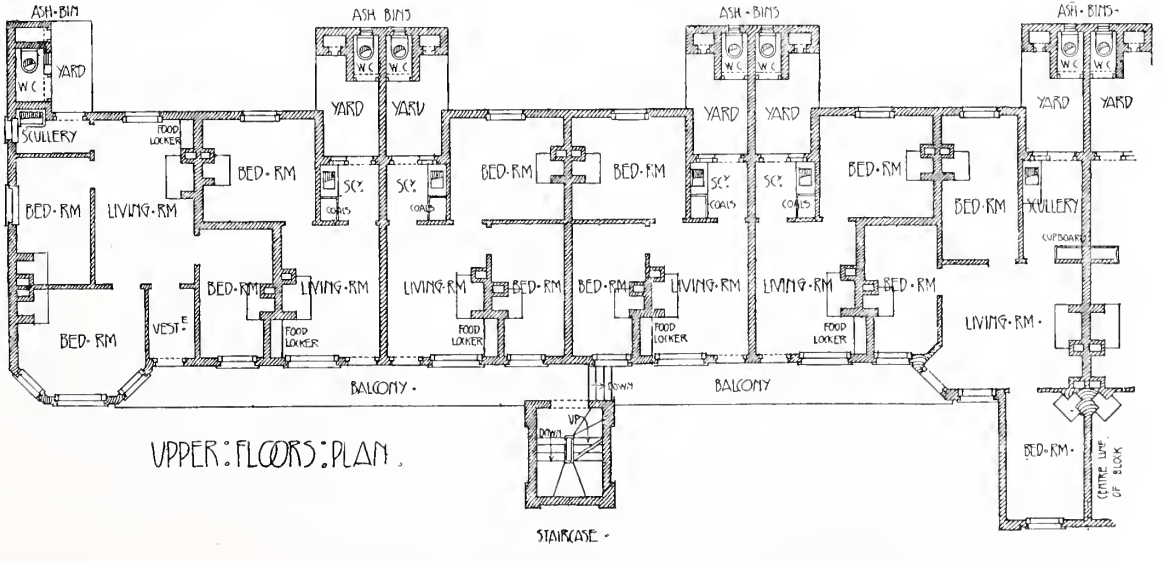
The new dwellings comprise 23 blocks or 445 dwellings, which it is estimated will accommodate 2,476 persons. There are 50 four-room dwellings, 257 three-room dwellings, 125 two-room dwellings, and 12 one-room dwellings, a keeper's house, 7 shops, and a recreation ground containing about 1,755 square yards. In Hornby Street the new dwellings are set back from the present line of street, so that for a considerable portion of the length of this street the width between the main line of the new dwellings will be 70 ft. Each house is provided with a separate sanitary convenience, and also with a scullery.

The buildings as a whole are three stories in height. Each living-room contains at least 150 superficial feet, the principal bedroom 125 superficial feet, the second bedroom 100 superficial feet, and the third bedroom, where one is provided, between 80 and 90 superficial feet.

The average height of the rooms is 9 ft. clear. The materials used are local grey brick, with red brick dressings, buff terra-cotta being sparingly used and only in the entrances. All the staircases are lined with glazed bricks, the roofs slated, and the floors constructed with small iron joists with coke breeze concrete, to which the flooring boards are nailed direct. The ashes are discharged into bins by means of shoots at the back. and are collected daily by carts.

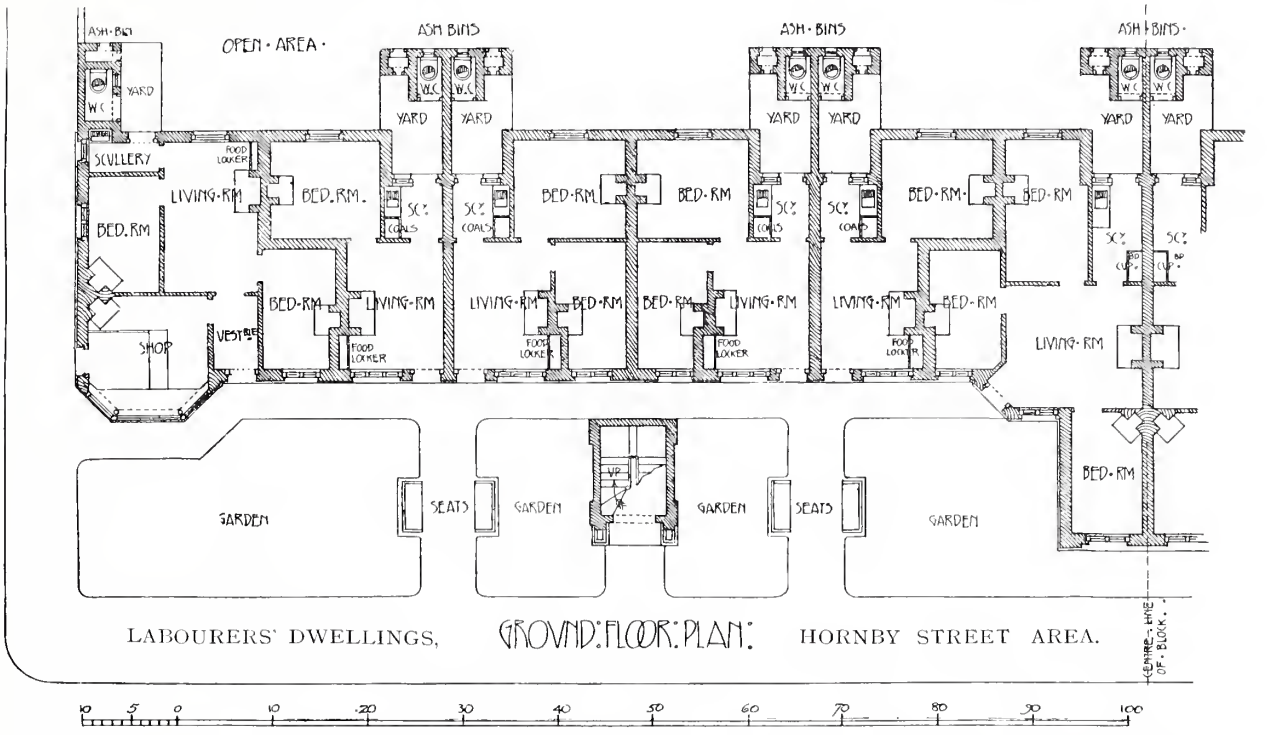
The first portion of the scheme, which has been completed, involved the demolition of 145 houses. The new dwellings on the site of this demolished area contain 138 houses; it is now proposed to proceed with the demolition of a second portion, and the dispossessed tenants from such portion will occupy the new dwellings just completed. In this manner it is thought that the whole scheme will be carried out in three portions.

Eighty years have been allowed for the repayment of the loan for the purchase of the land, and 60 years for the repayment of the loan for the erection of buildings.



UPPER FLOORS PLAN.

RENTALS: Two-room tenements, 2*s.* 9*d.* to 3*s.* 6*d.*; Three-room tenements, 4*s.* 0*d.* to 4*s.* 6*d.*; Four-room tenements, 4*s.* 6*d.* to 5*s.* 3*d.*




The following is a summary of all the dwellings erected by the Corporation of Liverpool :—

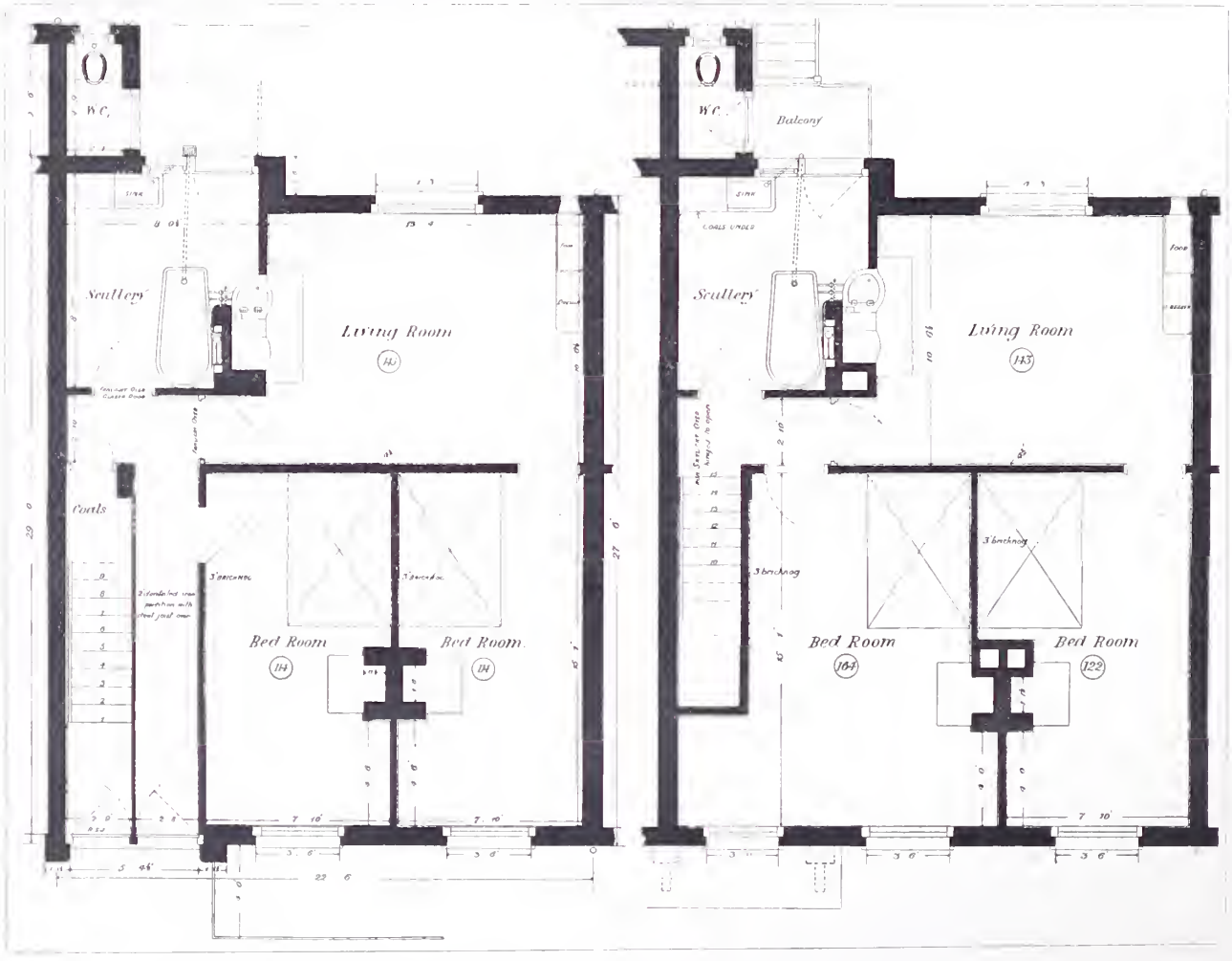
| Situation. | No. of Tenements of One Room. | Two Rooms. | Three Rooms. | Four Rooms. | Total No. of Rooms. | Total Number of Tenements. | Cost or Valuation of Land for Housing Purposes and Cost of Buildings. £ s. d. | Gross Annual Rental. £ s. d. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| **Dwellings Completed, viz. :** | | | | | | | | | |
| St. Martin's Cottages...1869 | ... | 72 | 36 | *16 | *316 | *124 | 17,928 16 0 | 1,135 2 4 | † Including Caretaker's house, &c. |
| Victoria Square .....1885 | 21 | 162 | 86 | ... | *610 | *270 and 12 Shops | 68,077 6 1 | 3,035 0 0 | * Including Supt.'s house, office, &c. |
| Juvenal Dwellings .....1891 | 45 | 53 | 3 | ... | 160 | 101 and 1 Shop | 16,166 7 11 | 878 17 0 | |
| **Reserved for Dispossessed Tenants only, viz. :** | | | | | | | | | |
| Arley Street.....1897, 1902/3 | ... | 24 | 22 | ... | 114 | 46 | 7,582 16 5 | 580 9 0 | |
| Gildart's Gardens Area— (Old) 1897 | ... | 86 | 2 | ... | 178 | 88 | 37,551 0 9 | 652 12 0 | |
| ,, ,, (New) 1904 | 31 | 22 | 79 | 9 | 348 | 141 | | *1,330 15 4 | † Including Caretaker's house. |
| Dryden Street .....1901 | ... | 160 | 16 | 6 | 392 | 182 | 30,191 14 0 | *1,579 14 4 | * Including Caretaker's house. |
| Kempston Street, &c. ...1902 | ... | 38 | 30 | 11 | 210 | 79 | *17,425 6 0 | (a)846 10 4 | † Building only. Land subject to ground rent. (a) Including Caretaker's house. |
| Kew Street, &c.....1902/3 | ... | 70 | 34 | *10 | 282 | 114 | 22,301 13 3 | *1,103 18 4 | * Including Caretaker's house. |
| Adlington Street Area..1902/4 | 48 | 70 | 135 | 18 | *671 | *272 | 48,249 1 6 | 2,751 10 0 | * Including Superintendent's house. |
| Stanhope Cottages .....1904 | 20 | 8 | 20 | 12 | 144 | 60 | 13,963 13 5 | *542 6 4 | * Including Caretaker's house. |
| Mill Street.....1904 | 19 | 6 | 15 | 15 | 136 | 55 | 13,278 19 3 | 502 15 0 | |
| Hornby Street Area ...1904 | ... | 50 | 68 | 20 | 384 | 138 and 2 Shops | 30,236 15 7 | 1,450 3 0 | |
| Clive St. and Shelley St..1905 | ... | 18 | *24 | ... | 108 | 42 | (a)9,126 0 0 | *422 10 0 | * Including Caretaker's house. (a) Estimates only. Accounts not yet made up. |
| **Dwellings in Course of Erection :** | | | | | | | | | |
| Clive Street and Shelley Street. | ... | 18 | 12 | 12 | 120 | 42 | ... | 585 0 0 approximate | |
| Upper Mann Street..... | ... | 27 | 18 | 9 | 144 | 54 | ... | 510 0 0 approximate | |
| Eldon Street ..... | ... | ... | 12 | ... | 36 | 12 | ... | 125 0 0 approximate | |
| **Dwellings in Contemplation :** | | | | | | | | | |
| Hornby Street Area..... | 12 | 75 | 189 | 30 | 849 | 306 and 5 Shops, also Keeper's House (5 rooms) | ... | 3,120 0 0 approximate | |
| Upper Main Street ..... | ... | 9 | 22 | 3 | 96 | 34 | ... | 328 7 0 approximate | |
| Grand Total..... | 196 | 668 | 823 | 171 | 5,298 | *2,160 | £ | 21,520 10 0 | |

* Including Two Superintendents' Houses, Offices, &c.

# BATTERSEA BOROUGH COUNCIL

## MUNICIPAL DWELLINGS · Latchmere Estate

Sketch of Tablet




Cost per room, £78. Cost per foot cube, 7*d*. Rent, 7*s*. 6*d*. per week.

# BATTERSEA BOROUGH COUNCIL.

## HOUSING SCHEME, LATCHMERE ESTATE.

UNDER the London County Council Joint Powers Act of 1900, the late Vestry were enabled to erect Artisans' Dwellings on the Latchmere Allotments, and the Borough Council, having in that year adopted Part III. of the Housing of the Working Classes Act, 1890, steps were taken to prepare a Housing Scheme. In 1901 the Council advertised for competitive designs, offering premiums for the three best sets of designs received. Mr. T. Blashill, formerly Superintending Architect to the London County Council, was appointed as assessor to assist the Housing Committee in selecting the best designs. No less than fifty-eight sets of plans were entered in this competition, and the designs were so varied and good that the Council, on the recommendation of their assessor, decided to give four extra prizes, making seven altogether, so as to have the benefit of seven sets of plans, and the scheme finally adopted was to some extent based upon these successful designs.

There are three distinct types of houses, viz. :—

Four-room tenements. Three-room tenements. Five-room houses.

The height of all rooms is 8 ft. 9 in. in the clear. The houses are built with hard stock bricks, the fronts being faced with picked stocks with red hand courses and quoins to the windows, whilst the front and back doorways have salt-glazed bullnose reveals. The roofs are slated with Welsh Countess slates capped with red tiles, the whole of the heads and sills to the windows are in granolithic, the entrance doorways being surmounted with a projecting canopy on moulded brackets (of the same material) and supported by a segmental arch.

Each tenement has its own separate entrance and back garden; the tenements on the first floor are provided with teak staircases giving access to the back gardens which are allotted to them.

The living-rooms are fitted up with combined food-cupboard and dresser (with an opening to the external air), and there is ample shelving accommodation in all the rooms. The whole of the tenements and houses are fitted with Cornes and Haighton's combined range, copper, and bath. The floors throughout are fireproof, being constructed of cement concrete carried on steel joists. The streets on the estate, and the laying of new sewers, drains, electric lighting, and water supply, were all carried out by the Council's workmen. The footway paving, the granolithic sills, heads, cantilevers, lintels and partition walls were also executed by the Council's Works Department; the same can be said of the electric light installation.

There are 315 dwellings on the estate, as follows :—

28 five-room houses, with bath scullery, rent 11*s*. 6*d*. per week.

70 houses, each containing two tenements of three rooms and bath scullery, rent 7*s*. 6*d*. per week, per tenement.

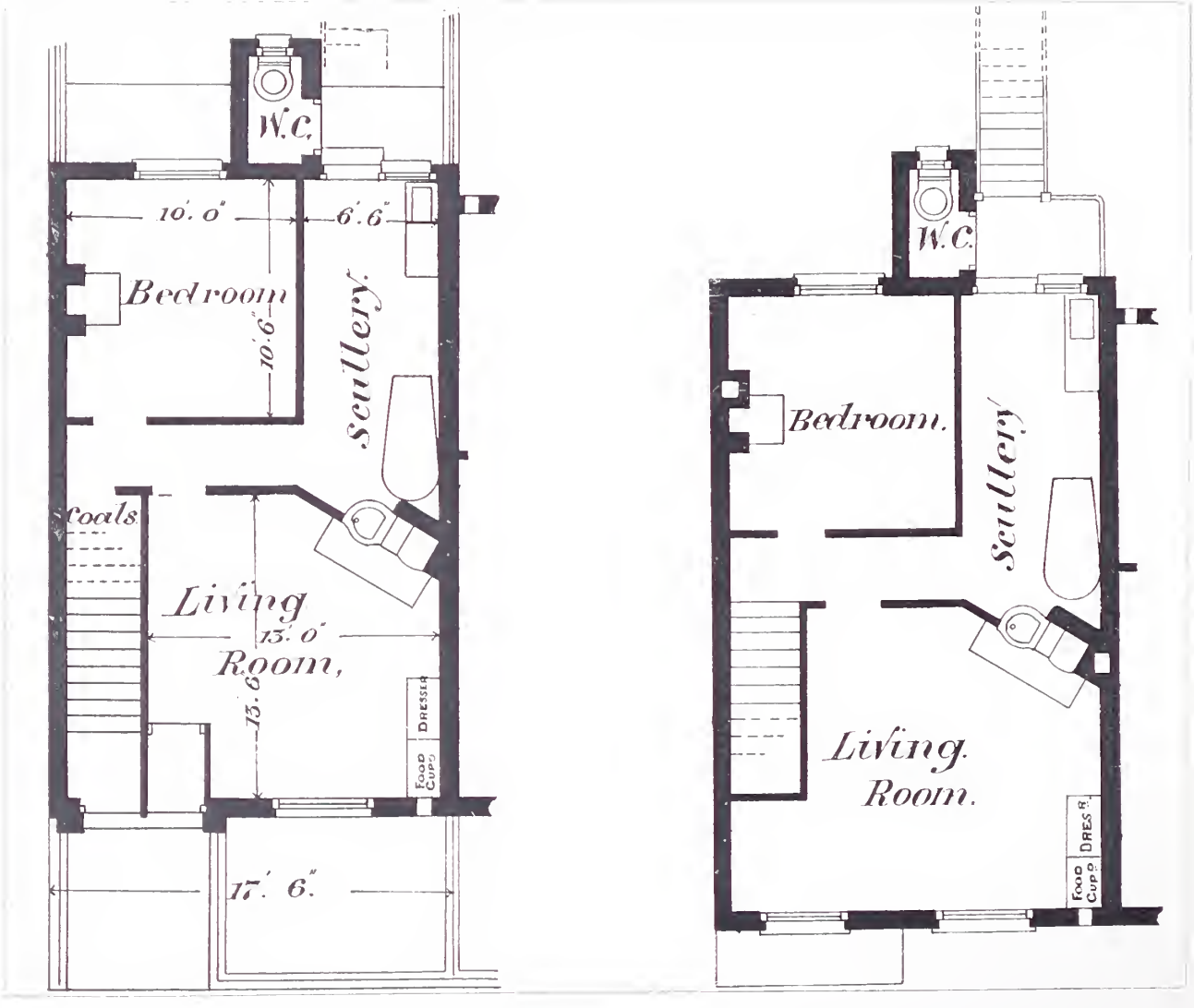
73 houses, each containing two tenements of four rooms and bath scullery, rent 10*s*. and 10*s*. 6*d*. per week per tenement.

1 four-room house, with bath scullery, rent 10*s*. per week.

The houses throughout are supplied with water obtained from an artesian well, sunk to a depth of 450 ft. by the Council; the water is of great purity, and is much appreciated by the tenants.

The houses also possess the advantage of a supply of electric light at a charge less than the equivalent of gas which rules in the district;—as a matter of fact, no gas is laid on. The electric light is provided on the penny-in-the-slot system at the rate of 4*d*. per unit. The Council provides in the first instance the necessary electrical fittings and lamps, but the expense of the renewals will have to be borne by the tenants, who will be able to obtain their supplies from the Superintendent at cost prices. This arrangement means that about 7½ hours' light from one ordinary 8-candle power lamp can be obtained for one penny.

This is the scheme which opponents to municipal enterprise have been attempting to adversely criticise. They do not see why the working people of Battersea should be allowed electric light at all: it is a luxury, they argue, which should be confined to the well-to-do, and they attempt to justify this by alleging that the ratepayers will have to pay for it. It is gratifying, however, to find that




Cost per foot cube, 7*d*. Rent, 6*s*. per week.

the estimates of the committees in charge of this scheme are being more than fulfilled, and the whole scheme is self-supporting, which is eminently agreeable to the ratepayers as to the tenants.

After a year's experience in the working of electric light it is found that the average cost to the tenants during the winter months is $1\frac{3}{4}d.$ per night, and during the summer months, $\frac{7}{8}d.$

The streets and buildings on this estate cover an area of nearly 8 acres, and the remainder of the estate, 3 acres, 3 roods, 35 poles, is reserved for a recreation ground. In addition to this the Council contemplate erecting some further houses on the fringe of this new recreation ground, so as to make the estate complete.

On August 1st, 1903, Mr. J. Burns, M.P., L.C.C., opened the estate, and in an eloquent speech said that, in his opinion, by building this colony, Battersea had contributed more to meet the alleged decadence of physique than all the articles that had ever been written in the newspapers, and the result of their scheme was a tribute to the unity of Parliament with other bodies.

Encouraged by the phenomenal success of this first undertaking, the Battersea Borough Council are now engaged upon a second scheme at the rear of the Town Hall, which will be known as the "Town Hall Estate." This, like the Latchmere Estate, is being carried out by direct labour, under the supervision of Mr. T. W. A. Hayward, A.M.Inst.C.E., F.S.I., etc., Borough Surveyor, who, happily possessing a practical knowledge of work of this character, will, by his ability, undoubtedly enhance the reputation which the Battersea Borough Council has already acquired.

The Housing Committee and the Borough Council, with Mr. Eaton, A.R.I.B.A., the architect, and all other officials concerned, are to be congratulated upon these splendid colonies of dwellings, which testify alike to their ability and knowledge of this intricate yet interesting subject.

| Financial Particulars, Latchmere Estate. | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| *Capital Expenditure*—On purchase of property, roads, sewers, artesian well, buildings, etc. ... ... ... ... ... | | | | 101,473 | 17 | 3 |
| *Annual Income*— | £ | s. | d. | | | |
| 28 Five-room Houses, 11s. 6d. per week, per annum ... | 837 | 4 | 0 | | | |
| 69 Houses containing two Three-room Tenements, Ground and Upper Floors, 7s. 6d. per week, per annum | 2,691 | 0 | 0 | | | |
| 73 Houses containing two Four-room Tenements, 17 Houses facing Sheepcote Lane, Ground and Upper Floors, 10s. 6d. per week, per annum ... ... ... | 928 | 4 | 0 | | | |
| 56 Houses, Ground and Upper Floors, 10s. per week, per annum ... ... ... ... ... ... ... | 2,912 | 0 | 0 | | | |
| One Four-room House, 10s. per week, per annum ... ... | 26 | 0 | 0 | | | |
| Two Three-room Houses, 7s. 6d. per week, per annum ... | 39 | 0 | 0 | | | |
| | 7,433 | 8 | 0 | | | |
| Less Repayment of Loan, Interest, Rates, and all other outgoings, including Collection and Superintendence and 10 per cent. Repairs and Upkeep ... ... ... | 7,295 | 0 | 0 | | | |
| Net profit balance ... ... | | | | £138 | 8 | 0 |

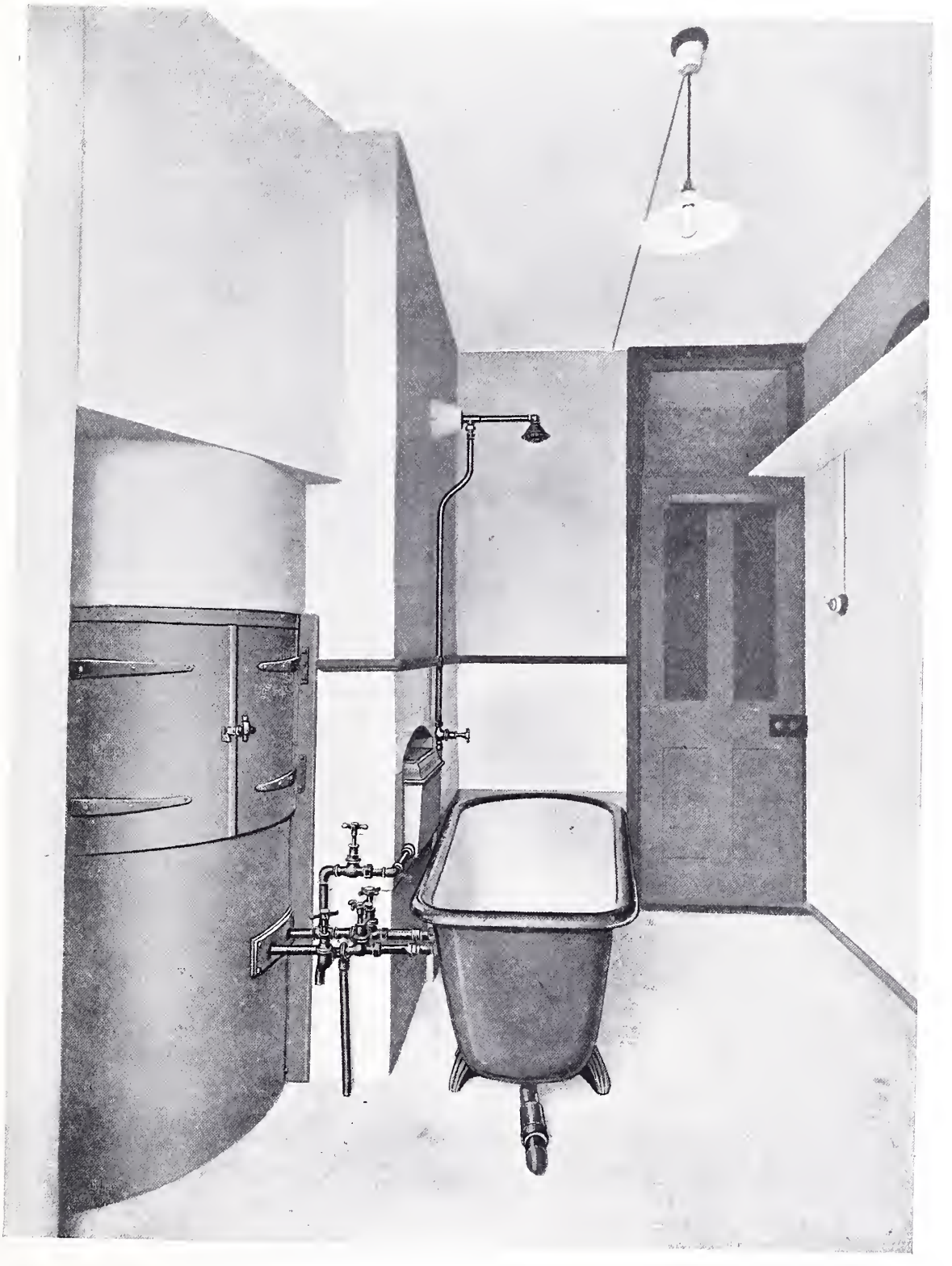
The rentals are 2s. 6d. per room, exclusive of bath-room scullery; the actual cost of building per room, exclusive of bath-room scullery, is £78, but if the bath-room scullery, which has a superficial area of 75 square feet, is counted as a room (and, considering that it is supplied with special fittings, this may be done), the cost per room would be £61. The price per foot cube of the building works out at a fraction under 7d. It will be of interest to know that the wages paid to the workmen who were engaged by the Borough Council on this work are as follows:—

| | | | | | |
|---|---|---|---|---|---|
| Carpenters ... | $10\frac{1}{2}d.$ per hour. | Electricians ... | $10\frac{1}{2}d.$ per hour. | Scaffolders ... | 8d. per hour. |
| Bricklayers ... | $10\frac{1}{2}d.$ ,, | Plumbers ... | 11d. ,, | Labourers ... | $7\frac{1}{2}d.$ ,, |
| Masons ... | $10\frac{1}{2}d.$ ,, | Plasterers ... | 11d. ,, | Watchmen ... | $7\frac{1}{2}d.$ ,, |
| Lathers ... | 9d. ,, | Painters ... | 9d. ,, | | |

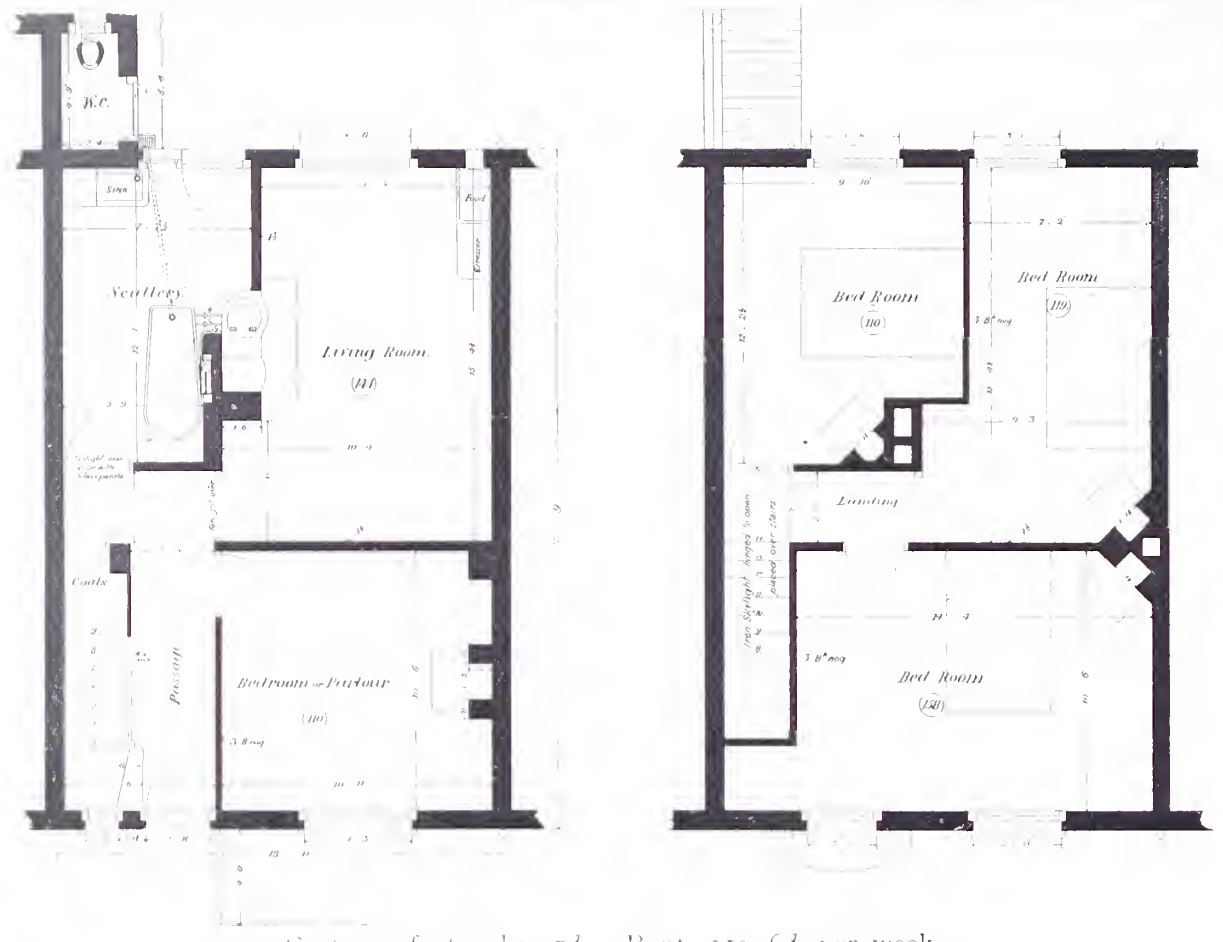
Forty-eight hours constitute a full week's work.

In conclusion it may be stated that the Latchmere Estate tenements have been visited by deputations from cities and towns throughout Great Britain, and also by deputies from America, Germany, Denmark, Sweden, and many other places.

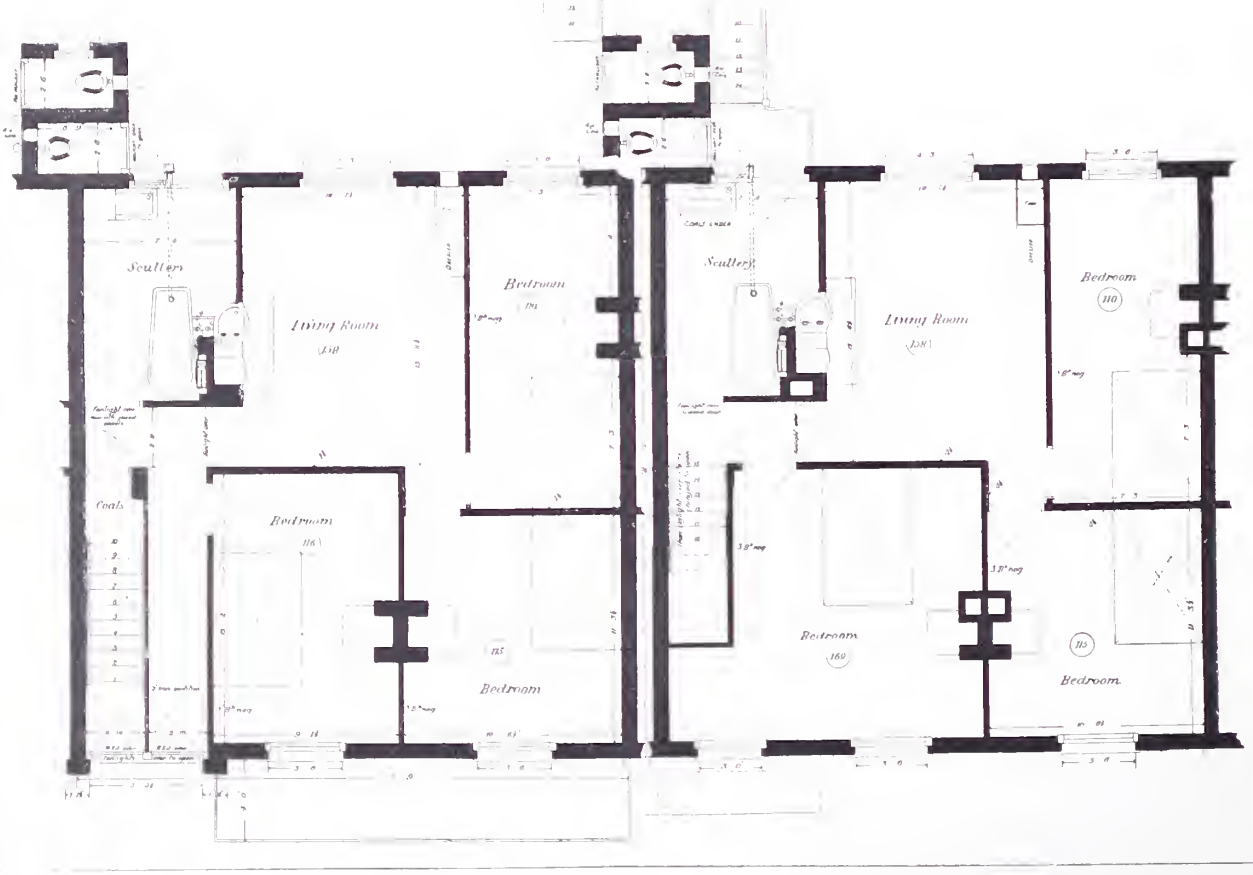
A Bath-room in Battersea Model Dwellings, showing Kitchen Side of Cornes & Haighton's Apparatus.



Scullery Side of Cornes & Haighton's Apparatus.




Cost per foot cube, 7*d*. Rent, 11s. 6*d*. per week.




Cost per room, £78. Cost per foot cube. 7*d*. Rent, 10s. per week.

# BOROUGH OF CAMBERWELL.

The Camberwell Borough Council in practical fashion has taken in hand a combined street improvement and housing scheme which is likely to be of great value to the inhabitants of the southern borough. The scene of the venture is Grove Vale, at the foot of the slopes of that Grove Hill about which the poets Maurice and Scott of Amwell have sung.

For years the meadows forming this valley at the foot of the southern slopes of the hill, while lending picturesqueness to the view, have effectually barricaded every direct approach to East Dulwich Station and neighbourhood, and have caused Copleston Road, Placquett Road, Bellenden Road, Placquett Terrace, Oglander Road, and Wildash Road, which all impinged upon the boundary fences, to be *culs de sac*.

The Borough Council purchased these meadows, of a total area of eight acres, for the sum of £8,000, for the housing of the working-classes.

A portion of the estate has been used for a much needed extension of Grove Vale depôt, and the remainder is being utilised for housing purposes.

The new roads give frontages to 93 houses, which will contain about 180 tenements for the working classes.

The work of laying out the land was carried out by men in the direct employ of the Council.

The tenements, as illustrated, have a most pleasing and artistic elevation, and at once strike the onlooker as being intended to elevate the neighbourhood both morally and socially.

The planning is really excellent. Besides bay windows to the front, the same idea has been extended to the kitchen, flooding the rooms with light.

Not an inch of space is lost anywhere, and the comforts and conveniences found in the dwellings are very surprising.

The best material has been used and the workmanship is really excellent, reflecting great credit on Mr. Harry Cooper, the clerk of works.

Each house is fitted with a gas stove and Cornes and Haighton's apparatus, and in the planning it will be noticed that the scullery has been divided off, forming a separate bath-room. Where this can be done it is always advisable, so that bathing may be indulged in quite privately.

The upper tenement is built to the same plan as the ground floor, but is so arranged as to get an additional bedroom; the rent is 11*s*. a week, the lower flat 10*s*.; these are inclusive rentals.

The forecourts are planted with trees and kept in order by the Borough Council, thus producing a uniformity which adds greatly to the appearance of the property, and at the rear there is a garden about 30 ft. by 9 ft. to each tenement, which appears to be much appreciated by the tenants.

So numerous have been the applications for these houses that they have all been allocated and let long before the completion of the buildings.

The average price of building works out at £470 a double tenement, or about £67 a room, not including the scullery and bath-room, or $6\frac{3}{4}d$. per foot cube, which appears a marvel of cheapness for London, especially when the excellence of this property is taken into account.

The Borough Council may well congratulate themselves upon the success of the scheme, which reflects the greatest possible credit upon their Engineer, Mr. William Oxtoby, M.Inst.C.E.

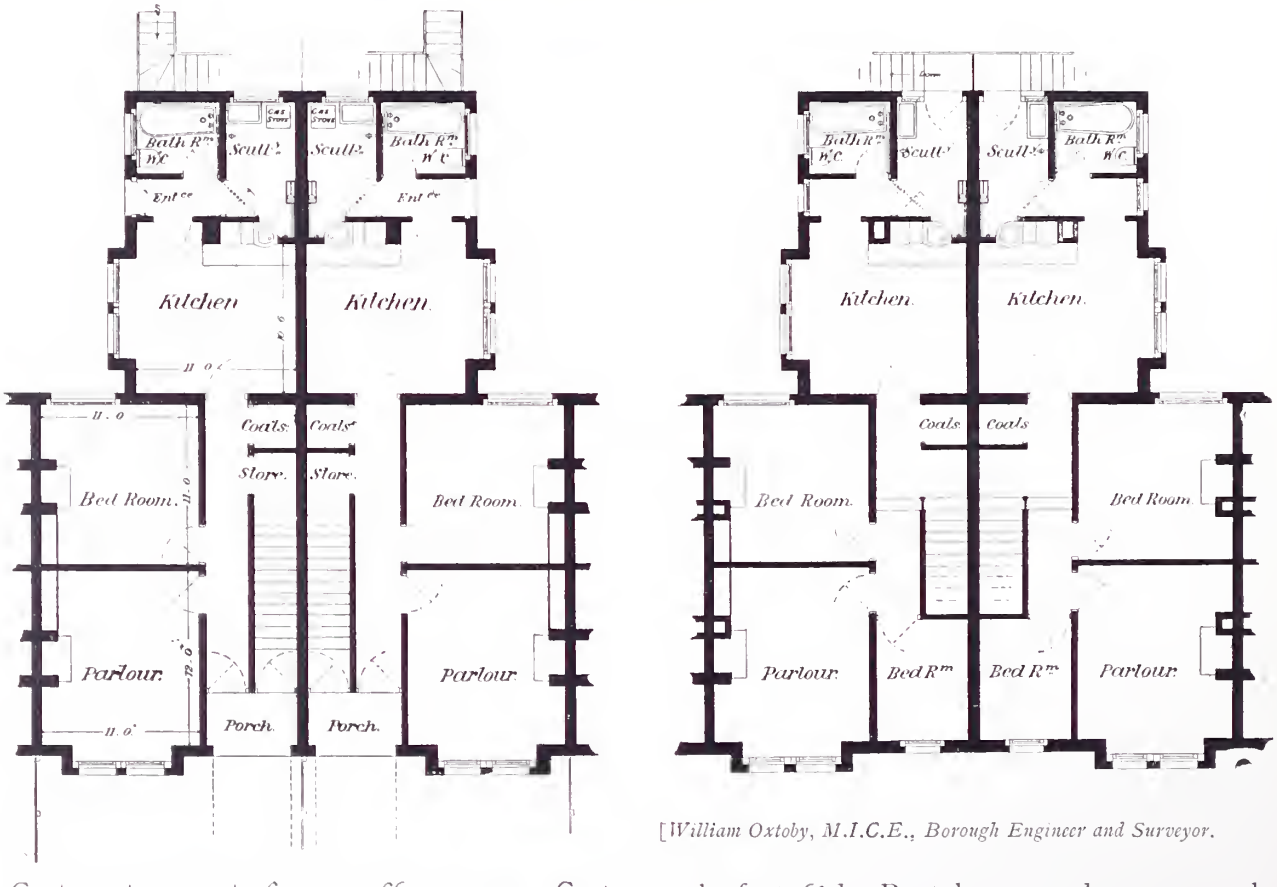
This property in years to come will be a valuable asset to the borough.

The dwellings have been visited by many important deputations, including the City Engineer of Paris, the Governor of Brandenburg (Prussia), and the Secretary to the Minister of the Interior.

Deputations visiting this housing scheme invariably look over the Council's depôt, which is adjoining and is one of the best equipped and up-to-date in England. It is under the able management of Mr. Henry Castle, and always proves a source of pleasure and education to those looking over it.

The entire scheme represents an outlay of nearly £50,000.

# CAMBERWELL BOROUGH COUNCIL WORKMEN'S DWELLINGS.




[*William Oxtoby, M.I.C.E., Borough Engineer and Surveyor.*

Cost per tenement, £235, or £67 a room. Cost per cube foot, 6¾*d.* Rentals, 10*s.* and 11*s.* per week inclusive respectively.

# SOUTHAMPTON CORPORATION.

THE following is a description of the work carried out under the "Housing of the Working Classes Act" by the Southampton Corporation :—

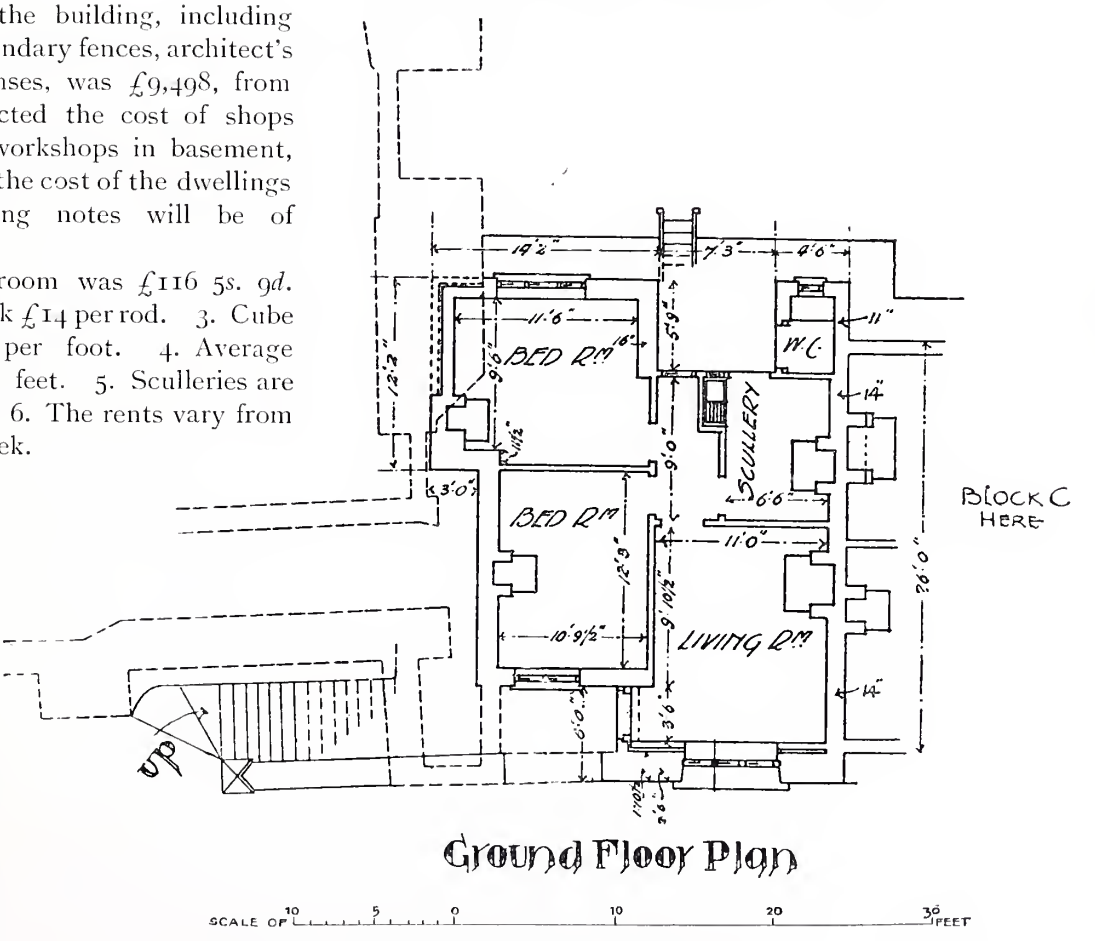
| ACCOMMODATION. | | TENEMENTS. | |
|---|---|---|---|
| | Rooms. | 3 Rooms. | 2 Rooms. |
| First Floor ... ... | 16 | 4 | 2 |
| Second ,, ... ... | 16 | 4 | 2 |
| Third ,, ... ... | 16 | 4 | 2 |
| Fourth ,, ... ... | 14 | 2 | 4 |
| | 62 | 14 | 10 |

A lodging house providing accommodation for 186 beds was built in the year 1898 at a total cost of £15,615; this sum included all furniture and utensils, and works out at £83 19*s.* per bed. The brickwork cost £14 per rod. The usual charge of 6*d.* per night is made, and the building has justified itself by the fact that it has often been found necessary to turn men away for want of room. Following the completion of the lodging house the Corporation decided to build a block of artisans' dwellings as here illustrated. They are five stories high, and the accommodation provided is shown in the annexed table.

The total cost of the building, including making up yard and boundary fences, architect's salary and office expenses, was £9,498, from which should be deducted the cost of shops on ground floor and workshops in basement, costing £2,289, making the cost of the dwellings £7,209. The following notes will be of interest :—

1. The cost per room was £116 5*s.* 9*d.* 2. The cost of brickwork £14 per rod. 3. Cube cost of building 8*d.* per foot. 4. Average depth of foundations 5 feet. 5. Sculleries are not counted as rooms. 6. The rents vary from 8*s.* 6*d.* to 4*s.* 6*d.* per week.

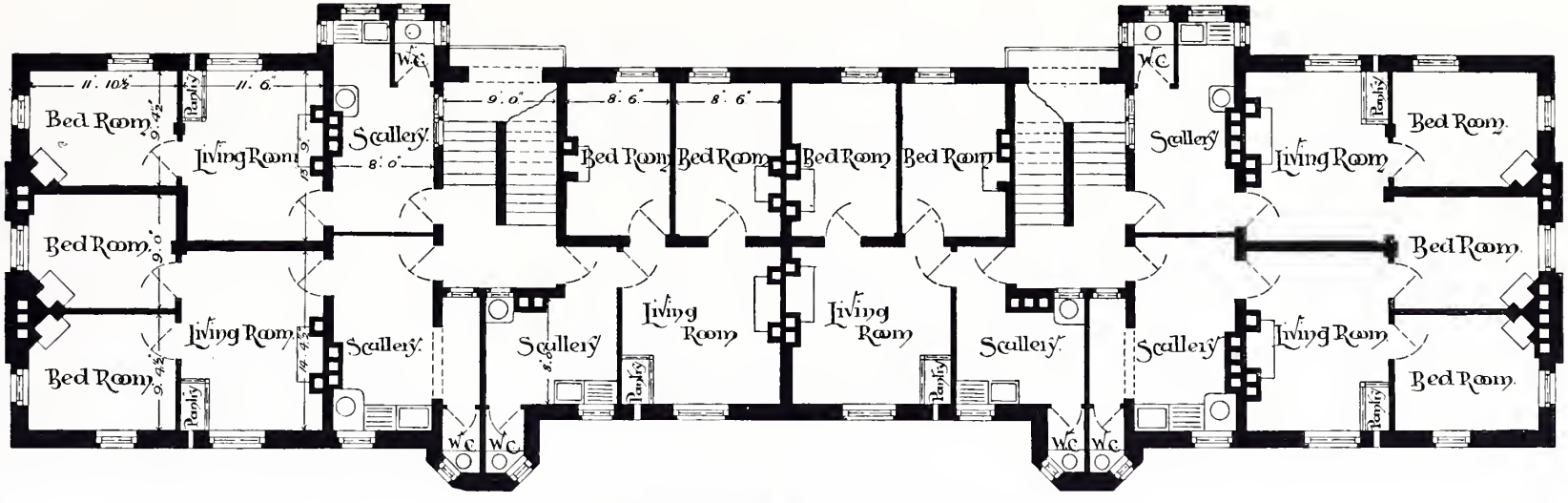
In 1903 the Council decided to build a number of cottage flats on the remaining portion of the site, which was previously occupied by some old and dilapidated houses. There are 66 cottage flats in all, and each flat consists of a living-room 13 ft. 6 in. by 11 ft. 6 in., one bedroom 13 ft. by



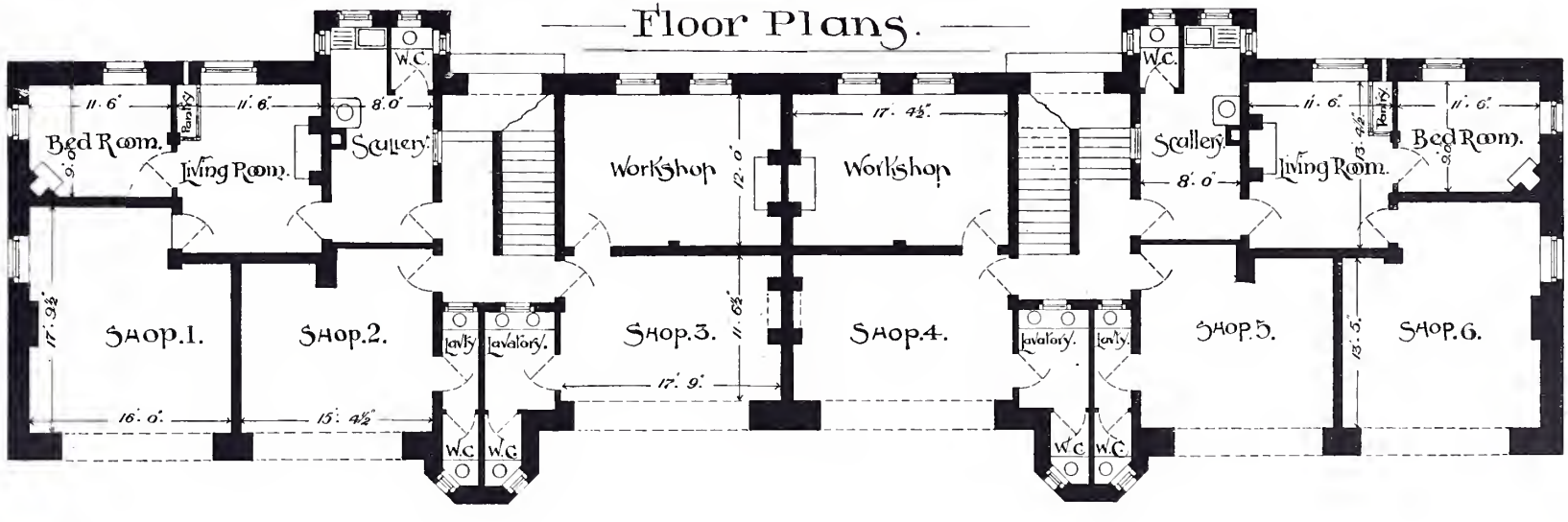

Portion of Simnel Street Area, Southampton.

[*C. J. Hair, A.R.I.B.A., Architect.*

Cost per room, £116 5*s*. 9*d*. Cost per foot cube, 8*d*. Rentals:—four-room tenements, 6*s*. to 7*s*. 6*d*. per week; three-room tenements, 4*s*. to 5*s*. per week.




## Second & Third Floor Plans.




## Ground Floor Plan.

Southampton Corporation Dwellings.

Charles A Stair A.R.I.Ba.
Architect.

8 ft., one bedroom 12 ft. 4 in. by 8 ft. 6 in., scullery 9 ft. by 7 ft. 8 in., and a w.c. One bedroom in the upper flat is slightly larger, as less room is taken up by the passage.

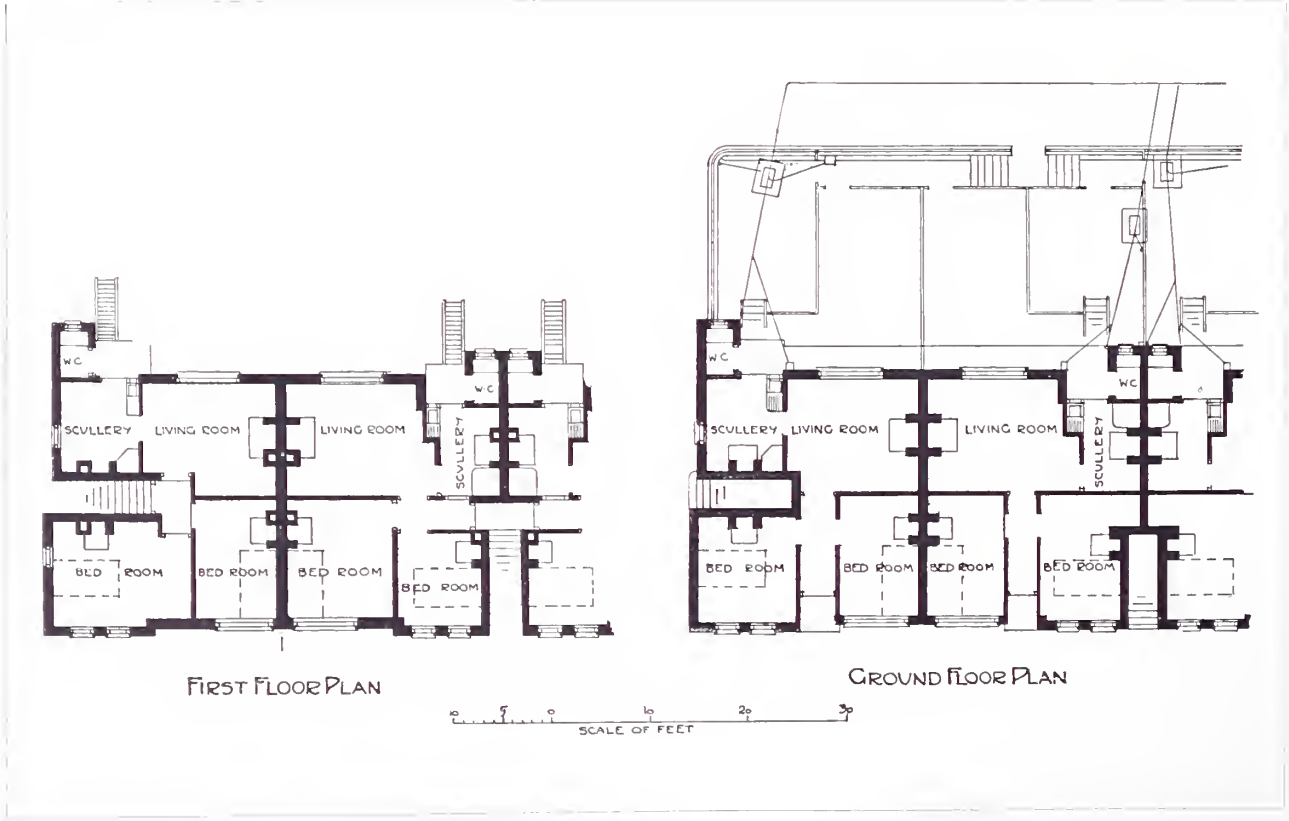
The floors are constructed of concrete 3 in. thick, which is made from the broken brick obtained from pulling down the old houses on the site. The principal advantage which is claimed for the design is that the entrances are entirely separate and each tenant has access to a private drying yard at the back, which is reached from the upper tenements by a flight of steps from the back balcony.

The cost of buildings (*re* 34 three-roomed tenements), including paving yards, boundary fences, architects' fees, and expenses, was £6,534.

Notes:—1. Cost of each cottage, £201. 2. Cost of each room, £67. 3. Cost of brickwork, £13 10*s.* per rod. 4. Average depth of foundations, 3 ft. 6 in. 5. Cube cost of buildings, 6*d.* per foot.

The proposed rentals are from 6*s.* to 6*s.* 9*d.* per week, including rates, etc., which will make ample provision for a return on the capital expended.

It is gratifying to note that Mr. Charles J. Hair, A.R.I.B.A., M.R.San.I., of 23, Portland Terrace, Southampton, has been entrusted with the whole of the work, as he has had many years' experience in this special class of design, and the Corporation of Southampton have reaped the benefit of the experience which he has gained in designing many housing schemes both for London and the provinces. The chief lesson to be learnt from the Southampton Housing Scheme is the great difference in cost between the "Block Dwelling" and the "Cottage Flat." In the former case the cost per room was £116 5*s.* 9*d.*, and in the latter only £67. There is no doubt that with a fairly level site and by strict economy in construction the cost per room could be brought down to £50.




[*C. J. Hair, Architect.*

## SOUTHAMPTON CORPORATION.

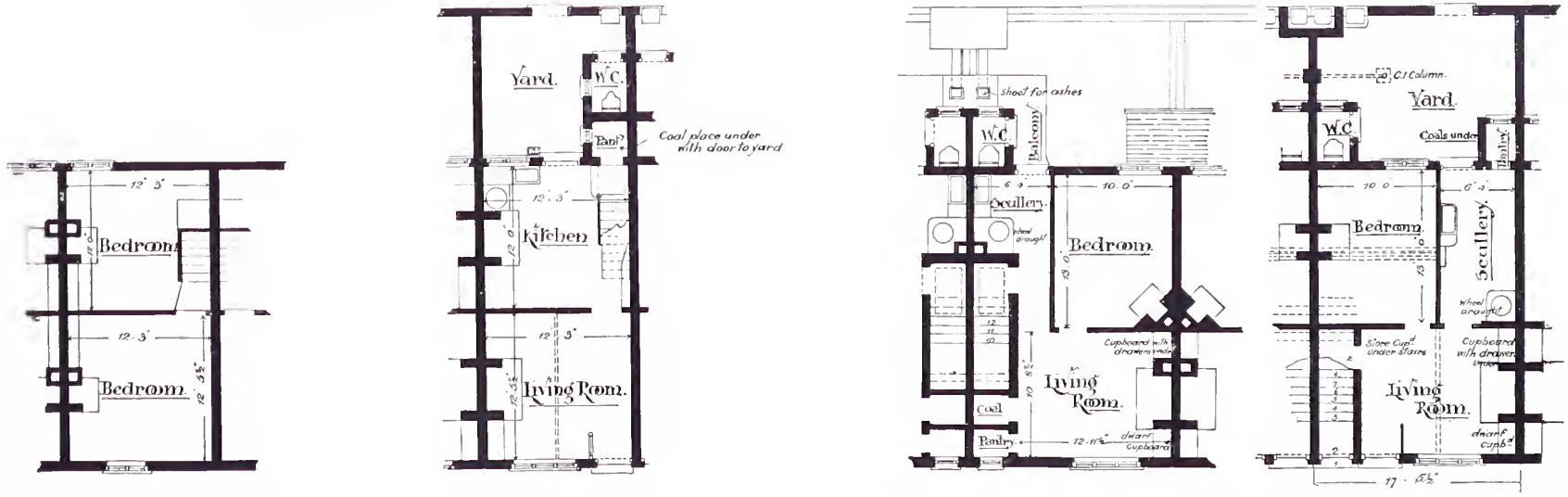
[C. J. Hair, A.R.I.B.A., Architect and Surveyor.

[C. J. Hair, A.R.I.B.A., Architect and Surveyor.

Cost per cottage, £201. Cost of room, £67. Rentals:—6s. to 6s. 9d. per cottage per week inclusive.

Front Elevation.

Front Elevation.




Chamber Plan. — Ground Plan.

First Floor Plan. — Ground Plan.

Seaford Road Housing Scheme

Plan for small dwelling houses

Springfield Lane and Dean Road

Tenement Scheme

County Borough of Salford.

SCALE 10 5 0 20 30 40 50 60 FEET

[J. Corbett, Borough Surveyor.

Cost per foot cube, 4*d*. Rentals, 5*s*. 9*d*. a week inclusive.

Cost per foot cube, 4½*d*. Rent of each tenement, 4*s*. 6*d*. a week.

# BOROUGH OF SALFORD.

THE Borough of Salford adopted the "Housing of the Working Classes Act" in the year 1890, and since that time has carried out several schemes, involving an outlay of over £100,000.

The cottage dwellings which are here illustrated are just completed and are situate at Seaford Road, adjoining the Tramway Depot. The group includes 231 dwellings, of which 200 are of the minimum size. Each of these contains a living-room 12 ft. 6 in. by 12 in. 3 in., kitchen 12 ft. 3 in. by 12 ft. (with two bedrooms of the same size over them). Each has a cooking range, the better one being in the living-room. In the kitchen is also a washing boiler, sink with water supply, cupboards, and off the kitchen is a small larder built over a coal-place in the yard.

The yard is 150 square feet in area and contains a w.c. and a dust-bin.

The front streets are 36 ft. wide and back streets or passages 12 ft. wide, all paved or flagged.

The buildings are faced with the hard red coal shale bricks, very impervious. The living-room floors are grooved and tongued boarding, the kitchen floors of red tiles on concrete bed. All rooms are plastered and well finished with wood mouldings, etc. There are no special ventilating appliances, but each room has a fireplace and flue. The group also includes 3 shops with dwellings attached, and 28 dwellings somewhat larger than the 200 above described, and with some small front gardens to them.

The 200 dwellings are intended to be let at an average rental of 5*s.* 9*d.* a week inclusive, the cost per cube foot being about 4*d.* The following financial particulars will be of interest:—

SEAFORD ROAD DWELLINGS.

*Capital Expenditure*—

| | £ | s. | d. |
|---|---|---|---|
| Land, 24,987 square yards at 6*s.* 9*d.* | 8,434 | 0 | 0 |
| Buildings | 38,500 | 0 | 0 |
| Street and Sewer Works | 6,500 | 0 | 0 |
| | £53,434 | 0 | 0 |

*Annual Expenditure*—

| | £ | s. | d. |
|---|---|---|---|
| Interest and Sinking Fund | 2,360 | 0 | 0 |
| Rates and Taxes | 890 | 0 | 0 |
| Management, Repairs, and Insurance | 370 | 0 | 0 |
| | £3,620 | 0 | 0 |

*Annual Income*—

| | £ | s. | d. |
|---|---|---|---|
| Gross Rentals | 3,618 | 0 | 0 |
| Allow for Empties and Losses, 5 per cent. | 181 | 0 | 0 |
| Net Estimated Rental | 3,437 | 0 | 0 |
| Estimated Annual Contribution from Rates to Sinking Fund for Purchasing the Property | 183 | 0 | 0 |
| | £3,620 | 0 | 0 |

A further scheme of tenements is projected, and will be built on the Springfield Lane site.

Allowing for four people to a tenement, the scheme will house 304 persons: 32 of the buildings will each contain on the ground floor one living-room, size 12 ft. 11 in. by 10 ft. 8 in., with one dwarf cupboard, one large cupboard with drawers under, and store cupboard under steps, one scullery 13 ft. by 6 ft. 4 in. with wash boiler, one bedroom 13 ft. by 10 ft., one pantry 3 ft. by 2 ft. 6 in. with coal place under, outside w.c. and Salford ash-bin.

Each of these buildings will contain on the first floor, one living-room 12 ft. 11 in. by 10 ft. 8 in., with one dwarf cupboard and one large cupboard with drawers under, one pantry 3 ft. by 2 ft. 6 in. with store cupboard under, one coal place 3 ft. by 2 ft. 6 in., one scullery 6 ft. 9 in. by 6 ft. 4 in. with wash boiler and sink, one bedroom 13 ft. by 10 ft., outside w.c., and Salford ash-bin. The first-floor tenements will each have a separate door and entrance from the street as shown in elevation.

The remaining six buildings will be similar to the above, but owing to the configuration of the land the rooms will be slightly larger, varying from a little more than the foregoing dimensions to the following:—

| | |
|---|---|
| Living-room ... ... ... | 14 ft. by 12 ft. 11 in. |
| Scullery ... ... ... | 14 ft. by 6 ft. 4 in. |
| Bedroom ... ... ... | 14 ft. by 10 ft. |

The ground-floor tenements will each have a gross yard area of 227 square feet, and a net area, exclusive of pantry, w.c., and overhead balcony, of 158 feet, but the first-floor tenements will only have a gross yard or balcony area of 49 square feet and a net area of 28 square feet.

The total estimated cost of this scheme, including clerk of works, legal charges and contingencies, is £19,444.

The annual expenditure, including interest for capital, sinking fund, rates, taxes, management, repairs, and fire insurance, is estimated at £1,137 6*s.* 9*d.*, and the rental of each tenement is intended to be 4*s.* 6*d.* per week.

It may be found necessary to make provision for an annual contribution from the rates to the sinking fund and interest account. Eighty years is taken for the purchase of the land and fifty years for the purchase of the buildings and streets, and the cost per cubic foot is about $4\frac{1}{2}d.$

The exceptionally high price paid for the land for these tenements makes it impossible for them to be quite self-supporting.

General View near Baldock Road and Norton Way.

# LETCHWORTH: FIRST GARDEN CITY.

WHAT is known as the Garden City Scheme is one of the most practicable and ambitious efforts to solve the Housing Problem. The scheme was first suggested by Mr. Ebenezer Howard in his book "Garden Cities of To-morrow," and, although in most details this experiment will differ from Mr. Howard's original conception, the main principles suggested in his work will be adhered to.

After the publication of the book, there was formed the Garden City Association, which gave publicity to the scheme and obtained sufficient public support to permit the formation of the Garden City Pioneer Company. This Company had a fully subscribed capital of £20,000, and had for its main object the investigation of estates, with the view of securing a suitable site for the establishment of a Garden City. After nearly a year's work, the Company selected a site comprising 3,818 acres near the town of Hitchin, about 34 miles from London. Before doing so, however, a large number of estates were considered, and, ultimately, the final selection lay between those of Chartley Castle, Staffordshire, and Letchworth Estate, Herts. Although the Letchworth Estate was much the smaller of the two, and the difficulties of purchase were greater, owing to the land being in the hands of thirteen different owners, it was thought that proximity to London was so desirable in the first experiment, that the Directors decided upon its purchase. The site is considered as admirably adapted for the purpose of industrial and residential development, being traversed by important highways, and, for a distance of $2\frac{1}{2}$ miles, by the Great Northern Railway from London to Cambridge. It is also within $1\frac{1}{2}$ mile of the Great Northern main line from London to the North, and of the Midland line from Bedford to Hitchin. There are already 52 trains per day to and from London to Hitchin, a number of which only take from 39 to 42 minutes on the journey.

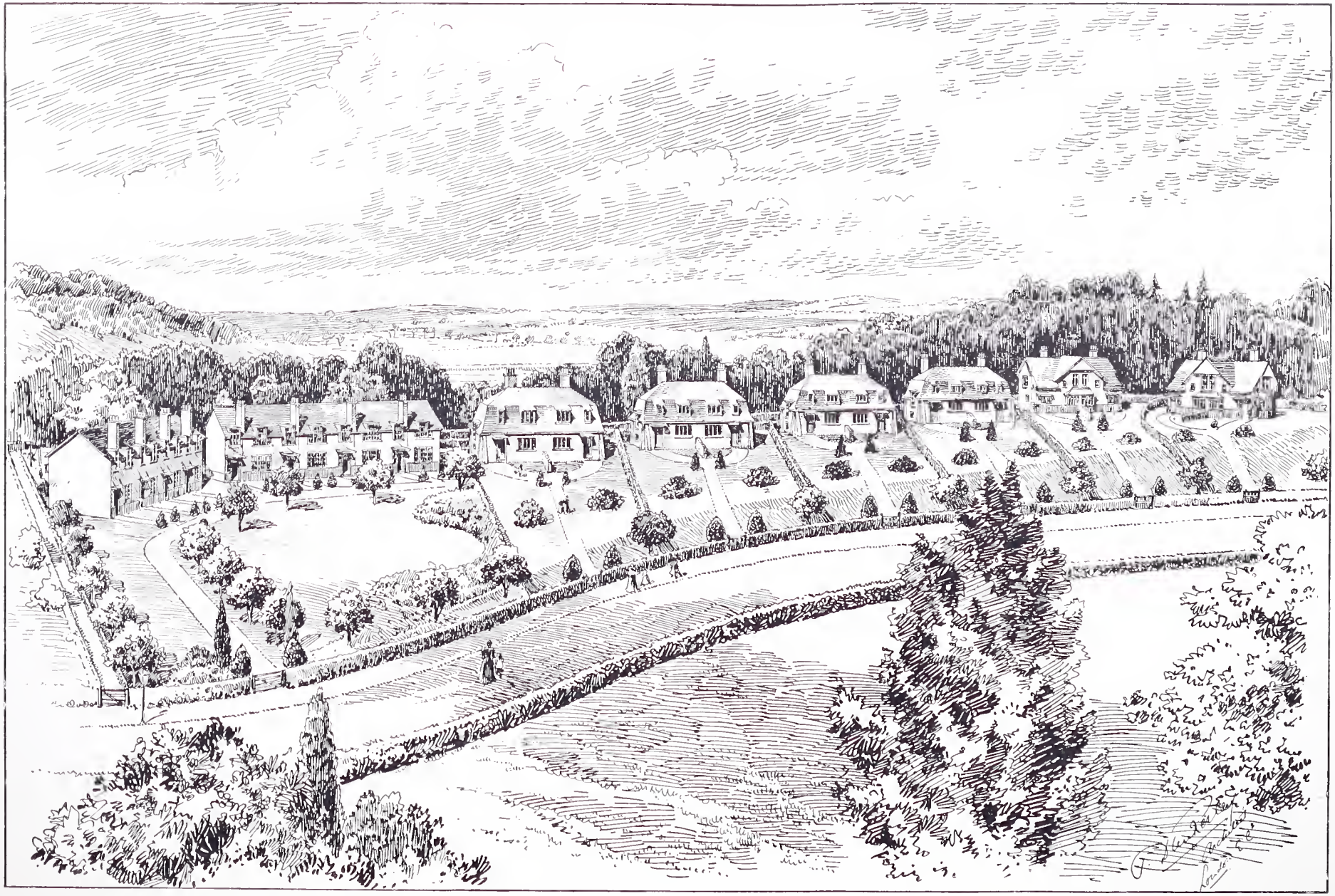
The estate has been purchased at a total cost of about £154,000, representing fully £40 per acre for an area of about 3,818 acres, on which there are a considerable number of buildings (valued for insurance purposes at £84,385) and some valuable timber.

It is now fifteen months since the First Garden City, Ltd., was formed, with a capital of £300,000, for the purpose of completing the purchase of the estate and carrying out the scheme.

In addition to the £20,000 subscribed previously to the Pioneer Company, nearly £100,000 has been subscribed to the larger Company, and the public will shortly be asked for further capital. The Directors of the Company are: Ralph Neville, Esq., K.C.; Edward Cadbury, Esq.; Henry Blackwall Harris, Esq.; Ebenezer Howard, Esq.; T. H. W. Idris, Esq., J.P., L.C.C.;

## FIRST GARDEN CITY, LETCHWORTH, HERTS.

Proposed Group of Cottages erected for the Heatley-Gresham Motor Coy., Limited. This scheme has been slightly revised, the two blocks of cottages shown on the left having been displaced by four pairs similar to those in the centre.

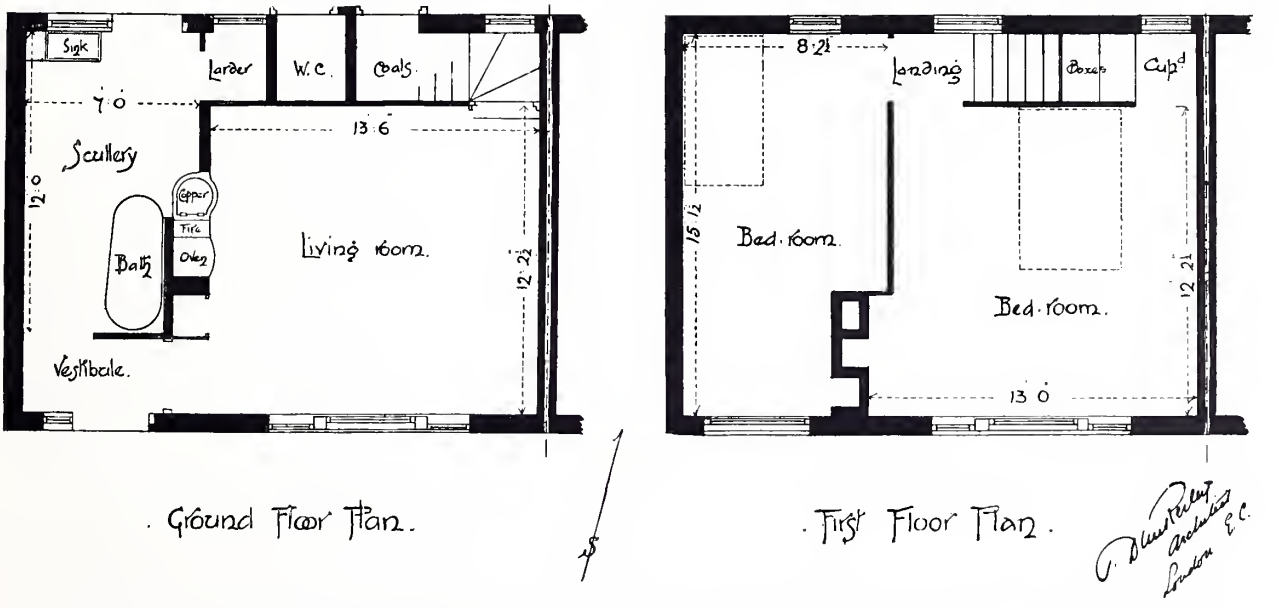


[*V. Dunkerley, Architect.*

Rentals, 5*s.* and 5*s.* 6*d.* per week inclusive respectively.

Howard D. Pearsall, Esq., M.Inst.C.E.; Aneurin Williams, Esq., and, among the leading shareholders, are such well-known names as the following:—The Right Hon. Lord Brassey, K.C.B.; Sir

FIRST GARDEN CITY: SUGGESTED COTTAGES.



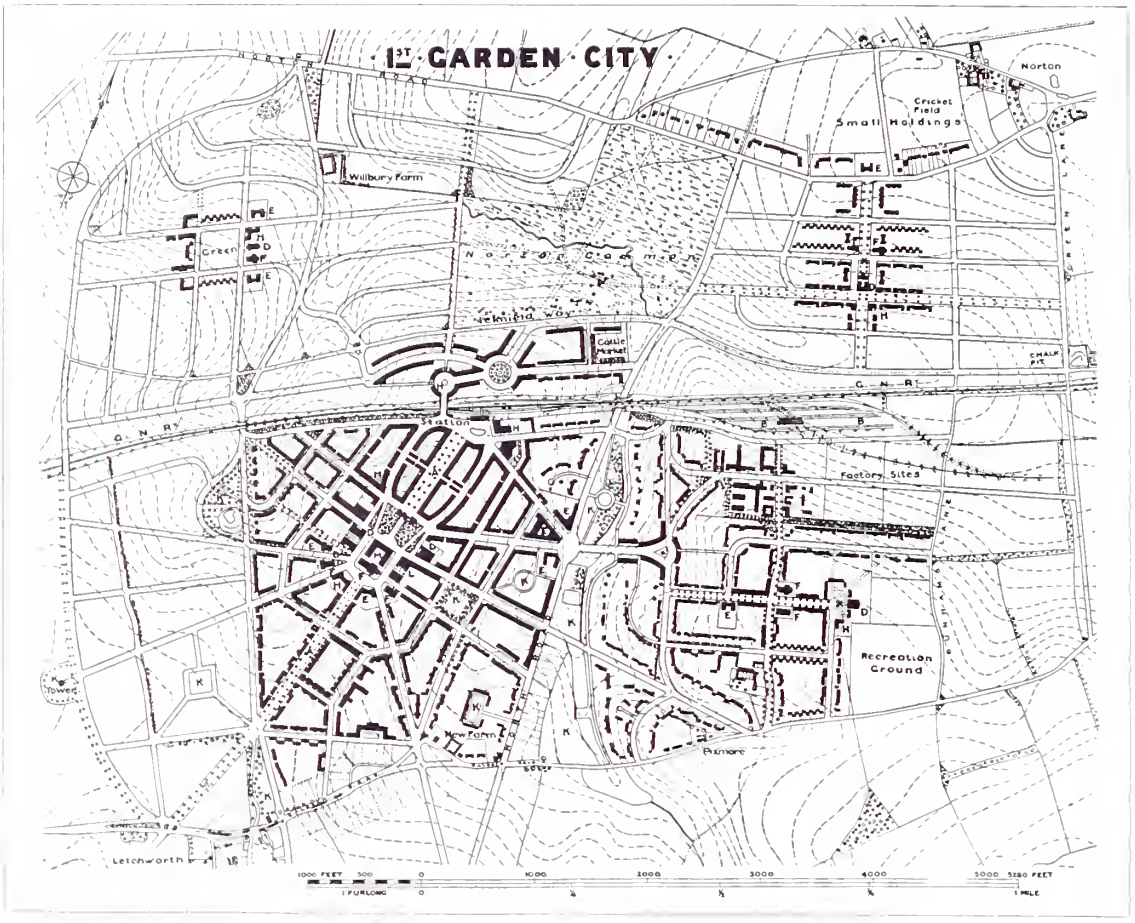

. Ground Floor Plan. . First Floor Plan.

Enlarged View of Block on left, shown on page 64. Cost, £135 each—4½*d.* per foot cube.

Alfred Harmsworth; George Cadbury, Esq.; W. H. Lever, Esq.; C. D. Rose, Esq., M.P.; Viscount Ridley; Viscount Howick; R. L. Barclay, Esq.; R. B. Martin, Esq.; Anthony Hope, Esq.; Richard Whiteing, Esq.; H. G. Wells, Esq. and Viscount Ebrington.

The tendency of manufacturers to move out of cities is one of the great factors on which the promoters of the scheme rely for creating the new town. The pressure of rents and rates in London and other large cities has become most severe, and manufacturers will welcome a scheme under which they can remove with the least amount of difficulty. Already several firms have decided to take sites in Garden City, three of whom have either erected, or are erecting, their works. These will employ about 100 people and introduce a new population of about 500 to the estate. When the estate was purchased, the inhabitants numbered only about 400, but they now reach 900, and will probably exceed 2,000 within another year.

Sites for 300 to 400 houses have been definitely let; a lease of an area of 25 acres is being granted to a building syndicate, who will erect 300 further houses; 200 new houses are in course of erection, and a considerable number have already been occupied. The Directors propose also to



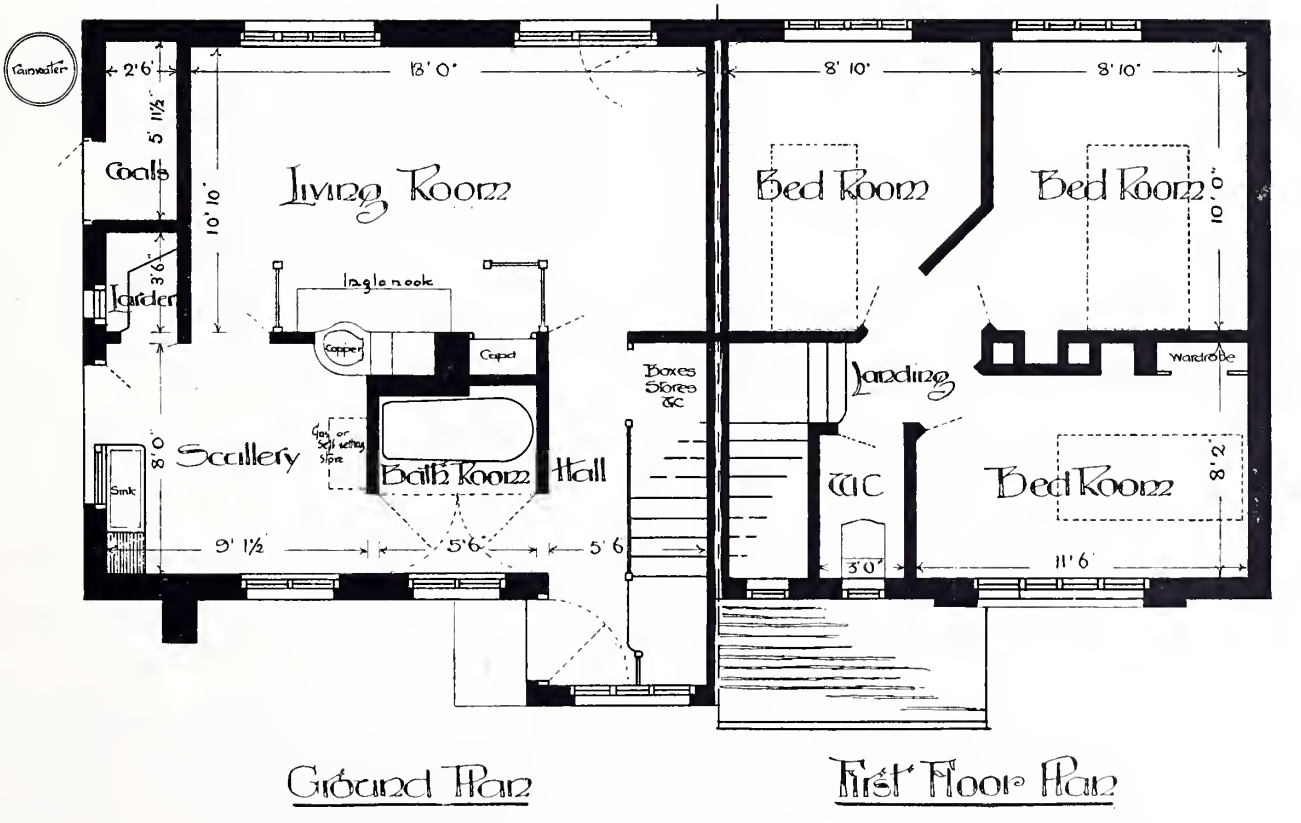

Provisional Plan of General "Lay-out."

A.—Main Avenue.
B.—Goods Station and Siding.
C.—Central Square.
D.—Site for Public Hall, Institute, Museum, etc.
E.—Site for School or other Educational Building.
F.—Site for Place of Worship.
H.—Site for Hotel.
K.—Open Spaces, Greens, or Parks.
L.—Site for Post Office.
M.—Site for Municipal Buildings.

grant to a further syndicate about 85 acres of sites for factories and workmen's dwellings. This syndicate will have a subscribed capital of £100,000, and they intend building factories for manufacturers who may prefer to have modern works built for them rather than to build for themselves. Associated with the idea is the building of "model cottages" for the people employed at the works, so that, within the city itself, a "model village" very much on the lines of Bournville and Port Sunlight is intended.

The first twenty cottages are in course of construction, and the illustrations are typical of the style and character of cottages that will govern this undertaking. Mr. V. Dunkerley, the architect, has exercised great care in the planning, and has shown much taste in the elevations, intending evidently to work in harmony with the ideas of the promoters, and to succeed in the building of modern dwellings at rents which the occupiers can afford to pay. Ample recreation and garden

# PROPOSED GARDEN CITY COTTAGES.




[*V. Dunkerley, Architect.*

Cost, £175 each—5*d.* per foot cube.

space will be provided, including a golf course which is being laid out. Overcrowding will be prevented by placing a limit on the number of houses which may be built on any one acre.

Of course, up to the present, there has been no effort to rapidly push forward with building operations, the water supply and sewerage schemes being only recently completed. From two to three miles of road are nearly constructed, and other works are in progress. Altogether, the Company is spending about £30,000 in the immediate development of its estate and in providing the facilities necessary for an urban population.

Of the 3,818 acres, about 1,200 will be occupied by the town, and 2,600 acres will be reserved permanently for agricultural purposes. The land will be let on lease either for 99 years, with the reversion going to the Company for the ultimate benefit of the community, or, for 999 years, with a revision of rental every ten years. The revision will be made by a valuer to be mutually agreed upon, and will be estimated apart from the tenant's improvements. The rentals now being obtained show a fair profit for the Company, after allowing all costs of development and other expenses, and, as soon as the first part of the town has been built, it will, of course, be possible to secure a substantial increase in these rentals. The liquor traffic will be under public control, as far as possible.

The exceptional features of the scheme are:—that the town is to be limited in size; that the greater portion of the estate is to be retained for agricultural purposes, and that the dividends of the shareholders are to be limited to a cumulative dividend of 5 per cent. per annum.

The advantages anticipated from this new departure in the development of the estate are: firstly, the provision of hygienic conditions of life for a considerable working population; secondly, the stimulation of agriculture by providing a better system of tenure, by employing co-operative methods, by developing small holdings, and by bringing the market to the farmer's door; thirdly, the relief of the tedium of agricultural life by accessibility to the town; fourthly, that the inhabitants will have the satisfaction of knowing that the increment of value from the land created by themselves will accrue to their own benefit.

The control of the site of a town from its commencement offers an unparalleled opportunity for the provision of open spaces, sites for schools and public buildings and allotments while land is cheap, and also for the supply of power, light and water on advantageous terms. These supplies the Company propose either to undertake themselves, or to procure on the lowest possible terms. Among other arrangements which have been made by the Garden City Company are, the establishment of a new post office and three hotels, the provision of a telephone service and other facilities. The railway sidings are now open for goods traffic, and have been considerably extended, while a passenger station has been opened in the centre of the estate.

Altogether, the scheme is making satisfactory progress, and it may be anticipated that, if the present experiment be carried to a successful issue, the housing problem will be in process of rapid solution by the multiplication of settlements on similar lines to First Garden City. By the distribution of people on the land on these lines, the Directors consider that they will arrive at the solution of the problem of how to obtain and increase industrial efficiency without lowering the national physique.

Further information can be obtained from the Secretary of the Company, 347, Birkbeck Bank Chambers, Holborn, London, W.C.

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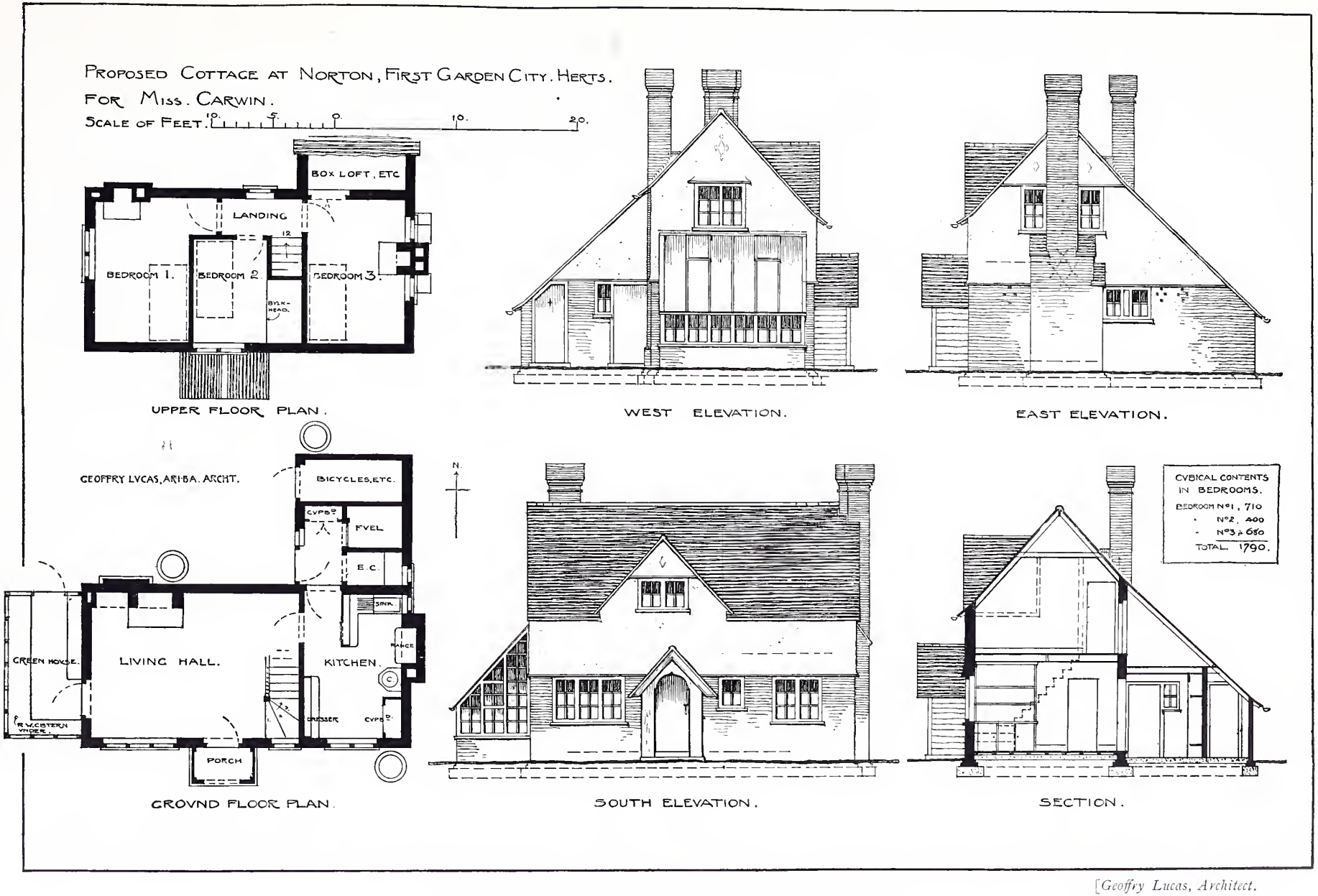
On the opposite page will be found the plan of a cottage proposed to be erected at Norton from the designs of Mr. Geoffry Lucas. The following is a brief description:—

The cottage is to be built in a prettily-wooded meadow at Norton, on the Garden City estate. The living hall is 17 ft. by 12 ft. There is a porch to the entrance, and a small greenhouse opens off the hall. There is a working kitchen, containing range, copper, sink, store cupboard and dressers, one dresser arranged with solid back so as to screen the kitchen from the living hall. E.C., coal store, cupboard and bicycle-house adjoin the kitchen. The stairs rise from the living hall, and lead up to three bedrooms, two with fireplaces and store space, on the upper floor. The materials are 9 in. red brick walls, and rough-cast upper story, with tiled roof and brick chimney stacks. The estimated cost is £180.




[*Geoffry Lucas, Architect.*

An Outlying Detached Cottage at Garden City.

# BOURNVILLE MODEL VILLAGE.

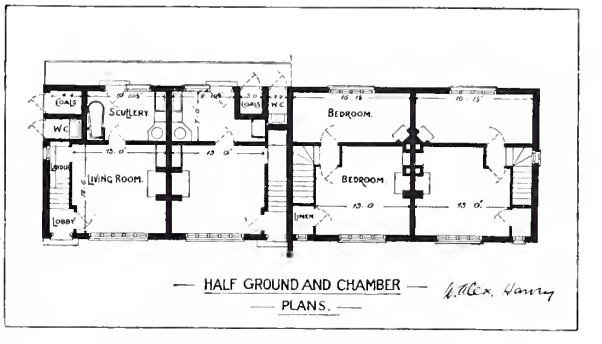
[*W. Alex. Harvey, Architect.*

# BOURNVILLE.

## A GARDEN VILLAGE.

When Mr. George Cadbury some years ago planned the now famous village of Bournville, he rightly gave special attention to the need for "earth room" as well as "house room," and it may without hesitation be said that the principal charm of Bournville to-day is to be found in the fact that it is truly a "garden village."

The reason for this insistence on the plentiful supply of "Mother earth" around the cottages at Bournville can best be given in Mr. Cadbury's own words. "I know the Birmingham housing question by visiting men in their houses in the city, and I have had the great privilege of reforming many hundreds of drunkards there. The question that came to me was, 'What have you to offer working men in the evening except the public-house?' and this was the answer I arrived at: 'The most legitimate occupation is for them to come back to the land.'




Rent, 6s. 6d. per week inclusive.

"The scheme here has been in operation about six years, and we have always had this result in view—as a matter of fact it has been the purpose of my life from the first. I can see no other way of saving England, for if a man works in the factory by day and sits in the public-house by night, what can you expect but a poor emaciated creature without physical or moral strength? Some of the well-to-do people around here complain that we are spoiling the country—perhaps there are fifty of them altogether. We may have spoilt it for them, but we shall be able to secure healthy accommodation for seven or eight thousand. It is a case of the greatest good for the greatest number, which surely represents a condition of things that every patriot who wants to see England a great country must long for."

In making a gift of 330 acres of land and nearly 300 houses, a gift equal in value to £180,000,* Mr. Cadbury decided to establish a Trust for the administration of the estate. The Trust takes the revenue as it accumulates, and expends it in the extension of the estate. There are now nearly 600 houses in the village.

The houses average about eight to the acre, each house having from five to six hundred square yards for site and garden. There are now about 600 houses in Bournville, with a population of about 2,700. The lowest rent is 4s. 6d. per week. There are 21 houses under 5s., 59 at 5s. 3d., and 123 from 5s. 6d. to 6s. and so on. These rents do not include rates and taxes.

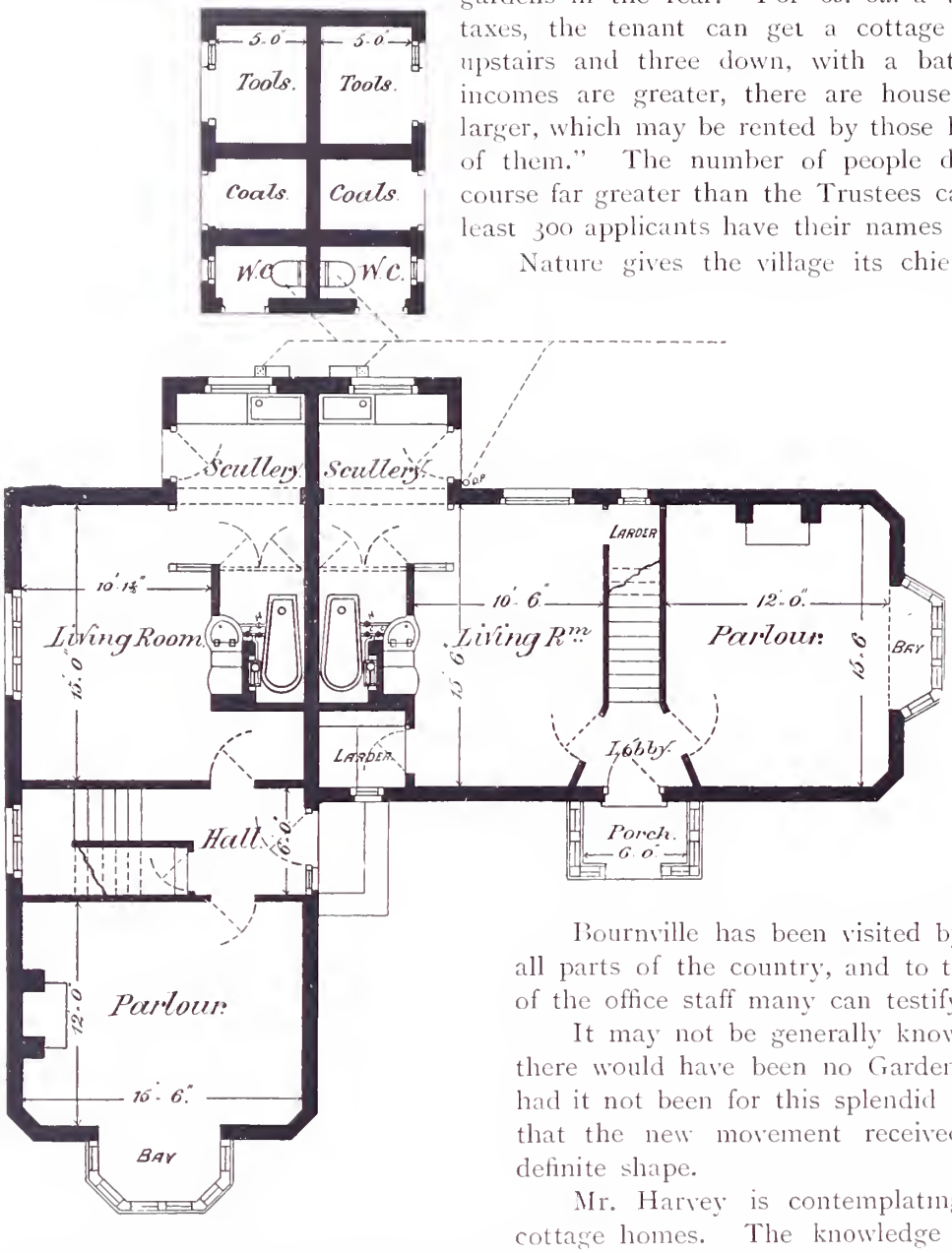
When all the land at Bournville is used up, estates will be purchased elsewhere and a second Bournville created.

The general character of the estate is thus described in the "Municipal Journal:"

"All around, following the natural undulations of the well-wooded ground, rise 'streets' of houses that are as picturesque as their surroundings; regular here, irregular there, but never wearying the eye with one monotonous style of architecture. Some are built entirely of brick, but in others (and they form the great majority) there are artful insertions of wood and plaster work, and oaken ogres

* By a subsequent gift from Mr. Cadbury this has been increased to 458 acres, and the total value to about £200,000. This does not include the cost of schools now being built by Mr. and Mrs. Cadbury, the contract for which is £19,220.

grin from underneath the bedroom windows. The butcher's shop is a veritable object lesson in artistic architecture; the post office is a picture, and 'Ye Olde Farm Inn,' standing a little way back from the Green, is the abode of contentment and peace, instead of boisterous roysterings and loud-voiced argument. Almost all the houses have little pieces of fore-court, and all possess substantial gardens in the rear. For 6*s.* 6*d.* a week, including rates and taxes, the tenant can get a cottage containing three rooms upstairs and three down, with a bath, and, for those whose incomes are greater, there are houses with more rooms and larger, which may be rented by those lucky enough to get hold of them." The number of people desiring the houses is of course far greater than the Trustees can supply. At present at least 300 applicants have their names on the books.



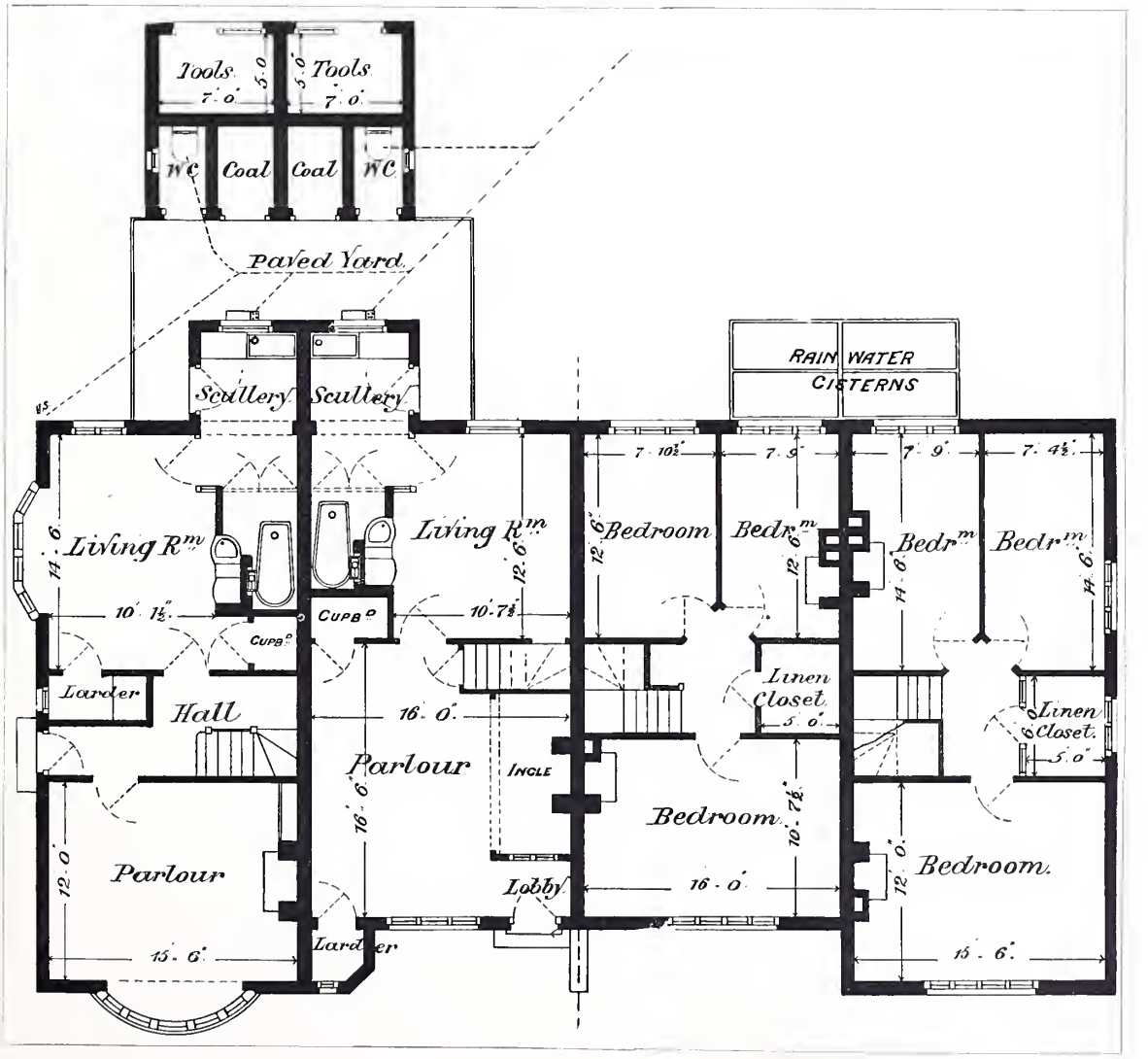

Nature gives the village its chief charms. Every house has 600 square yards of land, and, in practically every case, the tenants avail themselves fully of the opportunity to grow fruit, flowers and vegetables. The architecture is most pleasing. The houses are built in pairs, or in rows of four, and the architect, Mr. W. Alex. Harvey, has endeavoured with real success to make Bournville a "village beautiful." The attention to sanitation is shown by the low death-rate of 8·1 per 1,000.

Bournville has been visited by many deputations from all parts of the country, and to the kindness and courtesy of the office staff many can testify.

It may not be generally known that in all probability there would have been no Garden City in progress to-day had it not been for this splendid example, and it was here that the new movement received its impetus and took definite shape.

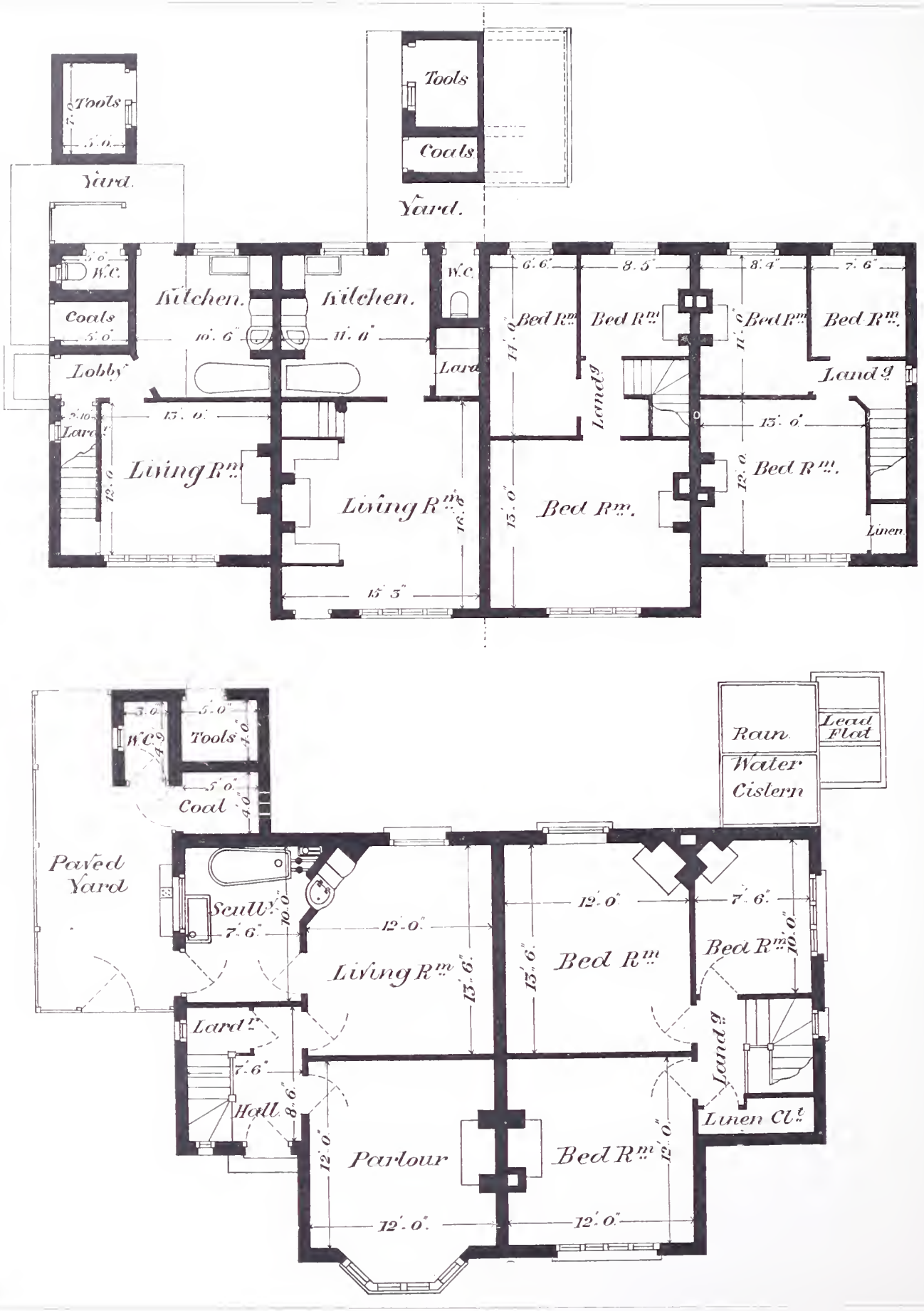
Mr. Harvey is contemplating publishing a work on cottage homes. The knowledge he has acquired of this subject provides him with ample material for such a work, and coming as it will from his own hands, it should be a valuable addition to publications of a like nature, and eagerly sought after.

# BOURNVILLE.




[W. Alex. Harvey, Architect.

# BOURNVILLE.




[W. Alex. Harvey, Architect.

## A BOURNVILLE BATH-ROOM.

Showing Cornes & Haighton's Apparatus in the Scullery-Bath-room.

PORT SUNLIGHT

A GENERAL VIEW.

# PORT SUNLIGHT.

PORT SUNLIGHT extends over an area of 221 acres, 140 of which are devoted to the village, and 81 to the Works; it contains about 3,000 inhabitants, all being employees or the children of employees, in the various departments of Messrs. Lever Brothers, Limited.

Though a village by reason of the restricted number of inhabitants, Port Sunlight presents the character of a town, on account of its manifold features of social life. It is, indeed, a small garden city, and, architecturally, is one of the most perfect and beautiful examples to be found in England.

No doubt the charm of Port Sunlight is produced by the variety of its houses.

The houses are built in groups, of three to nine houses at most in each group, and there are not two groups alike. The roads are, in most instances, forty feet wide, and some reach even the width of seventy feet. Trees and verdure are to be seen in every direction. Nothing has been neglected to impart a pleasant appearance to Port Sunlight.

The roads are arranged in the following manner:—A carriage way of a width of 24 ft.; pavements 8 to 12 ft.; and after that, turfed gardens, 18 to 30 ft. wide, upon each side.

In this way there is a space of 80 to 100 ft. between the houses, so that the sun can freely enter every house. The tenants do not attend to the front gardens, as in every case the Company's gardeners look after them. On the other hand, the backs of the houses are usually grouped around large gardens, where all kinds of fruit and vegetables are grown. These are the allotment gardens, of which every inhabitant may rent a part, and which he may till at pleasure. The frontages of the houses face the road, and the doors of the back yards abut on to the allotment gardens, which consist of a large piece of common ground parcelled out in equal parts to those who apply for a portion. The area of these allotment gardens covers about three-fifths of the whole quarter. Every group of three to nine houses forms in itself a small original block. The types of houses on the estate are best described in a paper which Mr. Lever read at a meeting of the Architectural Association, on March 21st, 1902, when he said:—

"We have really two standard types only—the cottage and the parlour house—although we have some half-dozen cottages which have less accommodation than the standard type of cottage, and perhaps a dozen houses, occupied by our clergyman, doctor, schoolmaster, managers and heads of departments, which provide specially for those they were designed and built to accommodate, and present no special variation from the usual villa or moderate-sized family house.

"We will, therefore, pass these exceptions over, and devote ourselves to the consideration of the standard type, which really is the type for 97 out of every 100 houses.

"In planning the standard type, the idea has been, firstly, to provide a garden as foreground to the cottage and screen from the road. These front gardens are in every case kept in proper order and cared for by ourselves. We have found by experience that no other plan is successful in securing a character to the village, and avoiding the unsightliness of here and there the obtrusion of neglected plots of garden which would mar the whole effect. This care by ourselves of front gardens is effected at a cost of 3*d.* per garden per week.

"In addition to these front gardens we have also allotment gardens to almost each block of cottages. These allotments the tenants cultivate themselves as vegetable gardens, or properly fence

and use for poultry, etc. These allotment gardens are placed as near as possible to each cottage, and are the very safety valve of the village. Their use and appreciation by the villagers speaks more eloquently than any words of mine of the need for such means of healthy recreation.

"You will note that the accommodation in the cottage type provides for three bedrooms upstairs, and living-room, kitchen, scullery, bath-room, and larder, on the ground floor, with enclosed yard and usual outbuildings. Our experience leads us to believe that any variation from these dimensions has not been popular with the villagers. If the rooms are made larger, it entails more work on the wife than she is able to devote to their care, and therefore the house soon loses its tenant. On the other hand, if the rooms are smaller they will not accommodate the necessary furniture, with a like result. In fact, a workman's cottage must fit like a glove the wants of the tenant, if it is to be a successful attempt to provide for the happiness and comfort of himself, wife and family.

"Having settled by experience the most suitable type of cottage, it has been adhered to in all the cottages at Port Sunlight and Thornton.

"The parlour cottages differ from the ordinary cottages in having an additional bedroom on the first floor and a parlour on the ground floor. In a few cases the scullery in these houses has been fitted with a kitchen grate, so that all the cooking could be done there, leaving the kitchen to be used as a dining room. The general type adopted for the parlour houses has proved popular, and therefore has been settled upon as permanent.

"The financial aspect of the village at Port Sunlight is soon told. The capital it has taken to buy the 140 acres of land, build the cottages, houses, schools, shops, institutions, clubs, etc., and including making the roads, laying out the parks, etc., has been over £350,000.

"Our standard type of cottage thirteen years ago cost us £200 each to build, and identically the same cottage in 1901 cost us £330 to build. The parlour houses cost us then about £350 each to build, and now about £550 each.

"Upon this £350,000 Lever Brothers, Limited, receive no interest or return whatever, the rents being fixed at such an amount as only to pay for rates, taxes, repairs and maintenance. The rents have had to be increased from 3*s*. per cottage per week to 5*s*. per cottage per week, owing to increased cost of maintenance of parks and roads and of the cottages themselves.

"The cost of repairs has gradually grown to extravagant proportions, owing to the fact that every tenant has been allowed practically any repairs he asked for. This was allowed because the tenants as a whole paid the total cost of repairs and maintenance, but this system does not bring it so clearly home to individual tenants that extravagance in requests for skilled workmen for trivial repairs is expensive. There are clear indications shown by the reduction in the number of such requests during the last six months that the last raising of the rents is having a good effect.

"From our experience, therefore, it appears that with the most economical expenditure on repairs and maintenance the rental of a cottage to cover rates, taxes, repairs and maintenance only would be 3*s*. 6*d*. per week, and of a parlour house 5*s*. 6*d*. per week, and that out of such rental nothing would be available for interest on capital outlay.

"Taking the value of the land at £240 per acre, and taking ten cottages per acre as the maximum number possible per acre, after allowing the proportion of each cottage for parks and recreation grounds, we should have a total cost for cottage and land of £354, which at 4 per cent. interest and 1 per cent. depreciation (in addition to cost of maintenance already provided for), is, say, £17 14*s*. per cottage per annum, or, say, 6*s*. 10*d*. per cottage per week. Adding this to the cost of rates, taxes, repairs and maintenance, we have a rental of 10*s*. 4*d*. per cottage per week as the letting value of the cottages of Port Sunlight on an ordinary commercial basis.

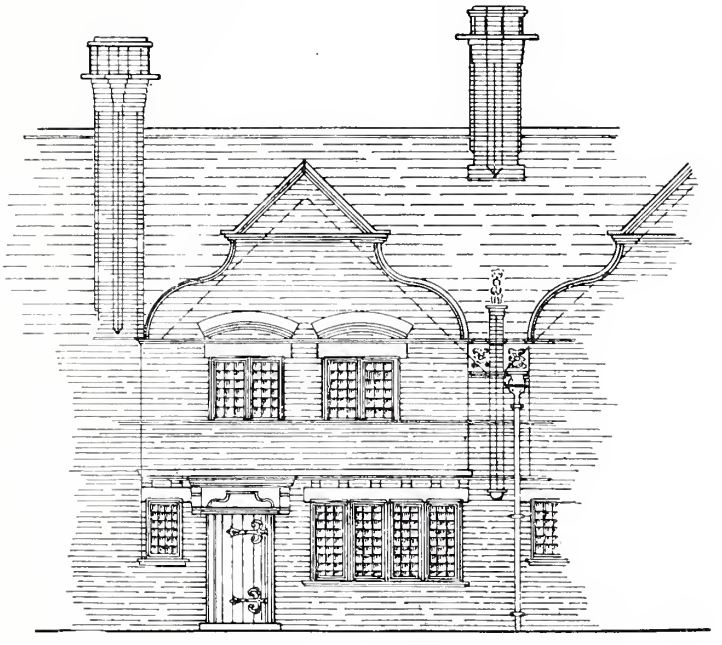
"Taking the rate of interest at 3 per cent. and of depreciation at ½ per cent., the sum of 4*s*. 9*d*. per cottage per week would be sufficient to meet these, and consequently a gross rental of 8*s*. 3*d*. per cottage per week would be sufficient.

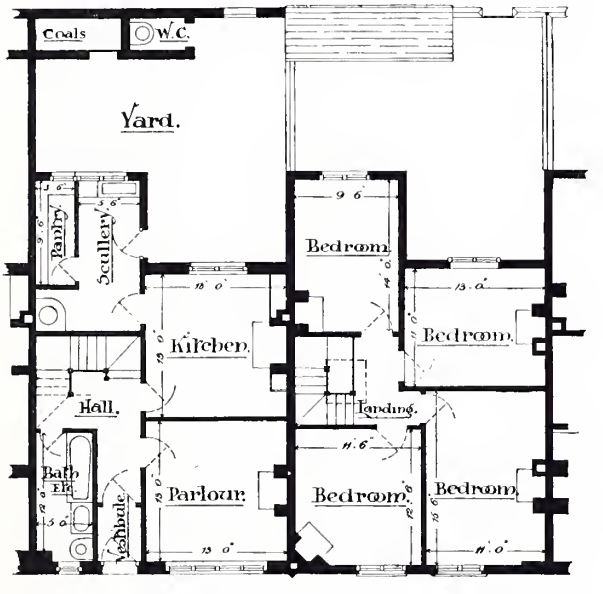
"My object in mentioning this is to draw attention to the fact that to build a village such as Port Sunlight is not commercially possible at the present time. To ask either of the above rents would be to place the possibility of living in such a village out of the reach of ordinary village tenants."

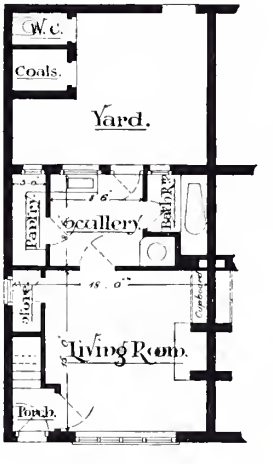
Port Sunlight Institutions are perfect, and include a hall, which was opened by Mr. Gladstone in 1891. It holds about 1,000 people, and is suitable either as a concert or dining hall.

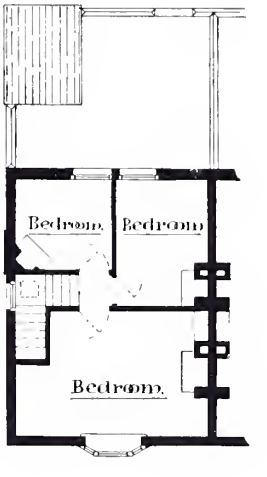
The second is the Hulme Hall. This is a real restaurant, and one out of the common, for 1,500

## PORT SUNLIGHT: Plans of Typical Houses.






people can sit down at once. The large dimensions of this building detract nothing from its elegance, and Messrs. Owen, the architects, have produced a really artistic work in designing this hall.

A Savings Bank is provided for the employees, and those who are able to save money prefer to invest it with Messrs. Lever Brothers, who pay 4 per cent. on the amount invested; the Scholars' Penny Bank is intended for the young Sunlighters, who, instead of buying sweets, prefer to put their pennies into the common treasury, whilst clubs for intellectual recreation and many other kindred institutions abound.

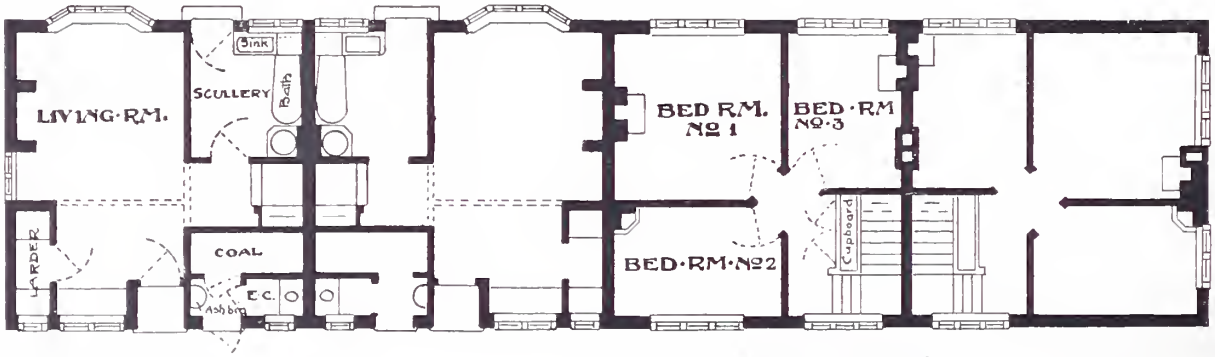
The death rate is only 9 per 1,000 of the inhabitants, and it is certain that the effect of such a place is beneficial in the highest degree to those privileged to live under such conditions.

Mr. Lever's experiment, viewed from the standpoint of a large employer possessing the laudable ambition of seeing his workpeople living under the most perfect and ideal conditions, has been eminently satisfactory, and Port Sunlight has shown what life in a garden city really is.

# EARSWICK - GARDEN VILLAGE.

South-East Front.

N·W·ELEVATION




GROUND · FLOOR · PLAN

FIRST · FLOOR · PLAN

## COTTAGES · BUILT · NEAR · YORK FOR · MESSRS · ROWNTREE · & · Co

BARRY · PARKER · & RAYMOND · UNWIN ARCHITECTS · BUXTON & BALDOCK · HERTS:

Cost per cottage, £185—5*d*. per foot cube. Rental, 4*s*. 6*d*. a week—rates and taxes being 8*d*. a week in addition, which the tenant pays.

# GARDEN VILLAGE TRUST AT EARSWICK, WEST HUNTINGTON.

Mr. Joseph Rowntree, the Chairman of Rowntree & Co., Ltd., has conveyed an estate of 120 acres, and a considerable amount of invested capital, to a body of trustees as a contribution to the solving of the housing problem. The gift is by far the largest presentation made to the district for many years, and the income from the estate (which up to the present includes the rentals of about forty cottages) will form the endowment of a trust, and will be sufficient to erect from twenty to thirty cottages per annum. Mr. Rowntree has long felt the need of better housing for the working classes, and as soon as he had an opportunity he purchased the Earswick Estate at West Huntington, about a mile from the well-known cocoa works. Mr. Seebohm Rowntree, one of the trustees and a student of modern sociological matters, is naturally greatly interested in the scheme, and it is gratifying to find that the founder and his co-trustees in this praiseworthy undertaking anticipate a business return on the capital expended, and have, therefore, calculated the rentals to yield a net return of from 3 to 4 per cent. on the outlay.

The estate will be laid out as a model village. Not less than one-tenth of the land of the trust (exclusive of roads) will be laid out and used as parks, recreation grounds, and open spaces, and none of the houses will occupy more than one-fourth of the area of the site on which it is built.

Trees are planted along the roads already laid out, there is a wide grass verge in addition to the footpaths, and the houses will each have gardens of 350 or more square yards.

About forty houses, artistic in appearance, sanitary, and convenient, have already been built. The following is a description of one group of houses of a class which has proved successful:—

"These cottages are designed for a site where the road and therefore the front entrance are on the northern and least attractive side of the plot, and where therefore the house should face to the garden and not to the road. By having a through living room, however, a window is obtained looking on the road, in addition to the main window facing the most sunny aspect and pleasantest outlook. For the sake of economy the house is square in plan, and all the conveniences are included in the square under the main roof, so that what would ordinarily be called the back of the house presents a pleasing appearance from the road. The living room measures 20 ft. 6 in. by 12 ft. The main part of the room, measuring 12 ft. by 12 ft., is quite free from traffic or draughts, and forms a comfortable sitting room end, while the other end of the room becomes the working or kitchen portion. The stairs lead from a deep recess in the room, and are well lit and ventilated by a window on the landing. The living room thus forms a thoroughly comfortable and roomy apartment, affording ample air space for the whole family, which is seldom to be found in a cottage living-room.

"A good scullery, 9 ft. by 8 ft., is provided with copper, sink, and bath, the latter having a hinged cover which serves as a table when the bath is not in use.

"A good larder, 7 ft. by 2 ft. 6 in., with a window on the cool side of the house, is entered from the working end of the kitchen. The w.c. and coal place, though under the main roof, are entered from outside, and are so cut off entirely from the inside of the house.

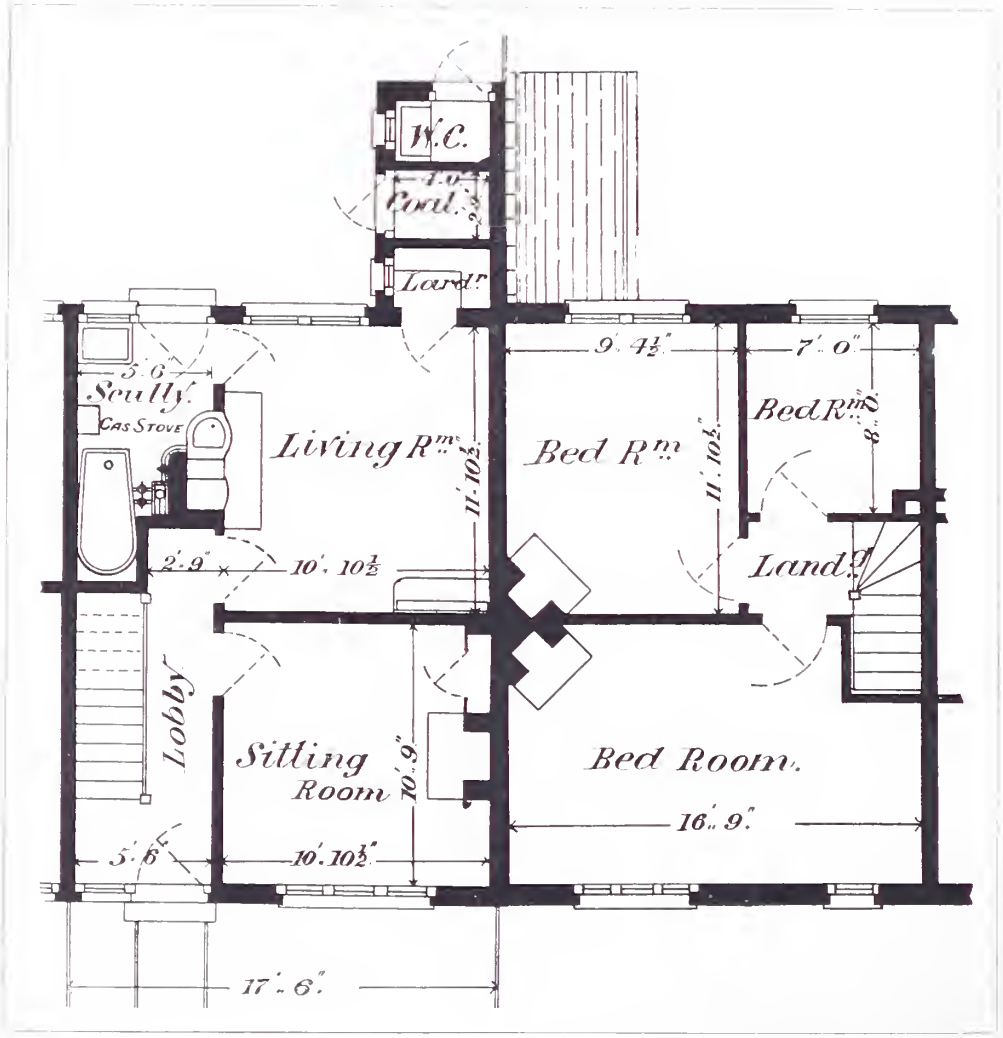
"Upstairs are three bedrooms—one 12 ft. square, one 12 ft. by 8 ft. 1½ in., and one 11 ft. by 8 ft. 1½ in. Fireplaces are provided in all the bedrooms.

"The walls are built of 9 in. brickwork, whitewashed on the outside, which gives a bright and cheerful appearance, and helps to weatherproof the walls. The roofs are covered with red pantiles, with overhanging eaves, and the woodwork is painted in bright shades of green."

The houses are let at 4*s.* 6*d.* per week, the rates and taxes being about 8*d.* per week, which the tenant pays in addition. The cost per cottage is £185, or 5*d.* per foot cube. The estate is sufficiently large to admit of the erection of 700 houses on the lines indicated, and Mr. Rowntree has provided one of the finest examples of how to house the working men of this country.

Messrs. Barry Parker and Raymond Unwin, of Buxton and Baldock, whose designs were accepted for laying out the Garden City at Letchworth, have designed the houses already built, and the accompanying illustrations and plans have been furnished by them.

# HORNSEY CORPORATION WORKMEN'S DWELLINGS.




[E. J. Lovegrove, M.I.C.E., Engineer and Surveyor.

Class B. Cost per cube foot, 6¼*d*. Rentals, 9*s*. 6*d*. per week inclusive.

# HORNSEY CORPORATION.

THE "Housing of the Working Classes Act" was adopted by the then Hornsey District Council, in 1896, and it was decided to put the Act immediately into operation.

Four and a half acres of land were purchased at a cost of £600 per acre for the purpose of erecting self-contained houses thereon at Hornsey.

The site selected abuts upon Nightingale Lane, and the Council laid out streets 45 ft. in width.

The houses built thereon are of two classes.

Class A consist of sitting-room, living-room, scullery, and 3 bedrooms, and are let at 8*s*. 6*d*. a week.

Class B consist of sitting-room, kitchen, scullery and 2 bedrooms, and are let at 6*s*. 6*d*. a week.

The scheme, which is self-supporting, involved an outlay of £31,000.

Following this the Council embarked upon a second scheme at Highgate for the erection of 48 cottages on similar lines. The land in this case, however, cost £1,000 per acre, and the total cost of this scheme was £16,700.

Encouraged by the exceptional success of these two schemes, the Council embarked last year upon another for the erection of 140 houses, on a site abutting on Nightingale Lane, situate near the first undertaking.

In this case there are four classes of workmen's dwellings.

Class A contains a sitting-room, living-room, scullery, and 4 bedrooms, rent 11*s*. 3*d*. per week.

Class B is the same as Class A, but with a bedroom less, 9*s*. 6*d*. a week.

Class C gives the same accommodation as Class A, but with 2 bedrooms, rent 8*s*. per week.

Class D contains living-room, small scullery, bath-room, and 2 bedrooms, rent 6*s*. 6*d*. a week.

The financial particulars are attached hereto.

The total expenditure amounts to £47,585.

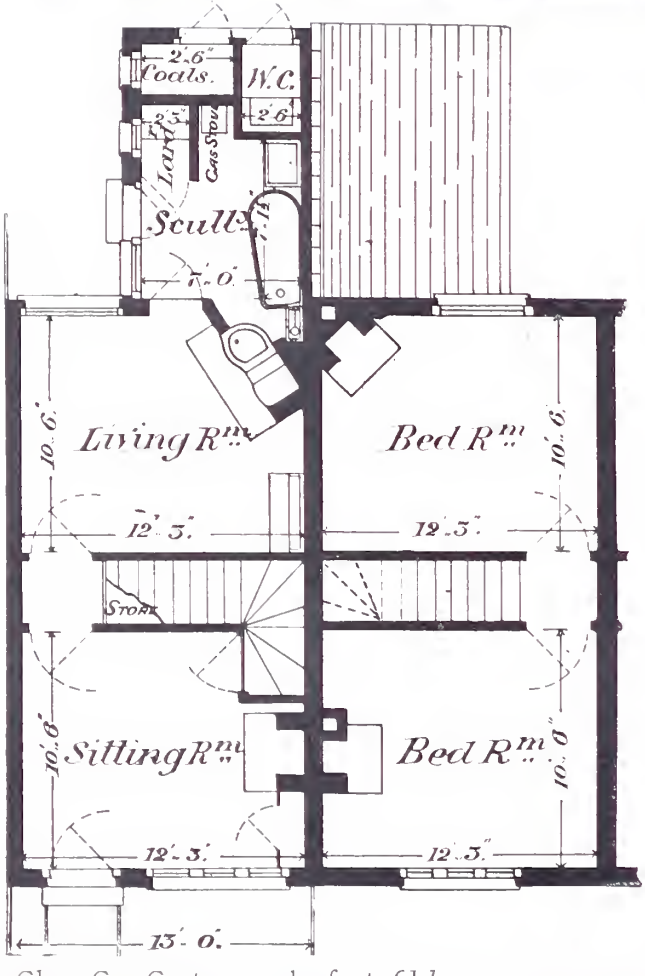
This sum provides for several new features, one of them being the introduction of Cornes & Haighton's combined range, copper, and bath in each of the cottages.

It may be interesting to state that this is the third housing scheme which has actually been carried out by Mr. E. J. Lovegrove, M.Inst.C.E., the Council's Engineer and Surveyor.

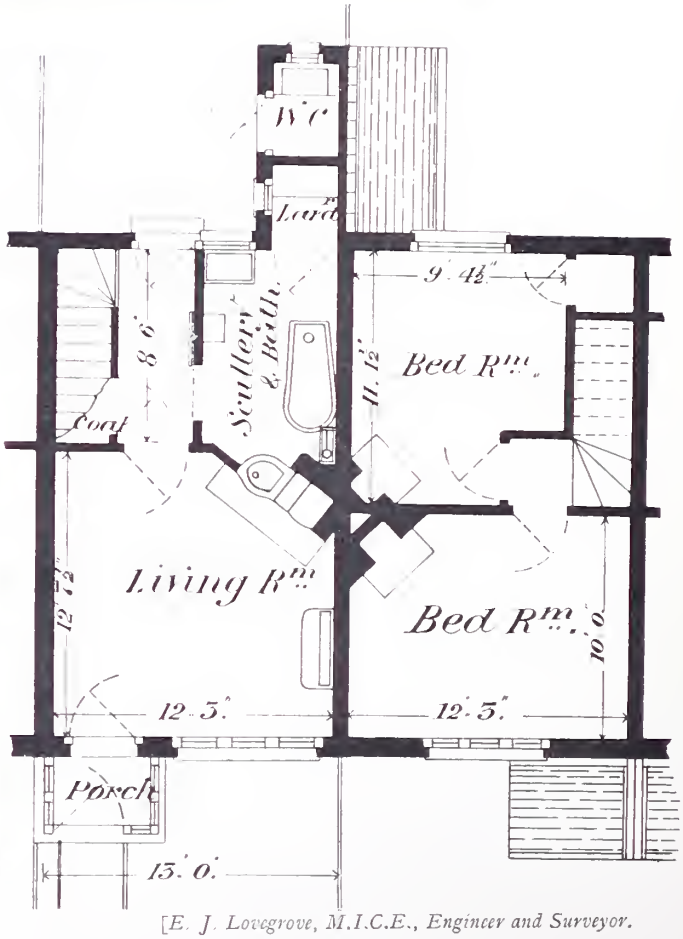
The Richmond cottages, to which Alderman Thompson refers in his popular "Housing Handbook," were also designed by him during his surveyorship to that municipality, and are often referred to as the first successful municipal cottages.

No wonder that, with so much knowledge of this subject, he has been able in his fourth scheme to rear a colony of self-contained workmen's dwellings unsurpassed in the country. Within a few miles of the heart of London he has succeeded in building, amongst other classes named, a self-contained cottage with a forecourt, garden at the rear, and four rooms including a bath and every other modern convenience, to let at 6*s*. 6*d*. per week inclusive rental.

# HORNSEY CORPORATION WORKMEN'S DWELLINGS.




Class C. Cost per cube foot, $6\frac{1}{4}d.$
Rental, 8*s.* per week inclusive.



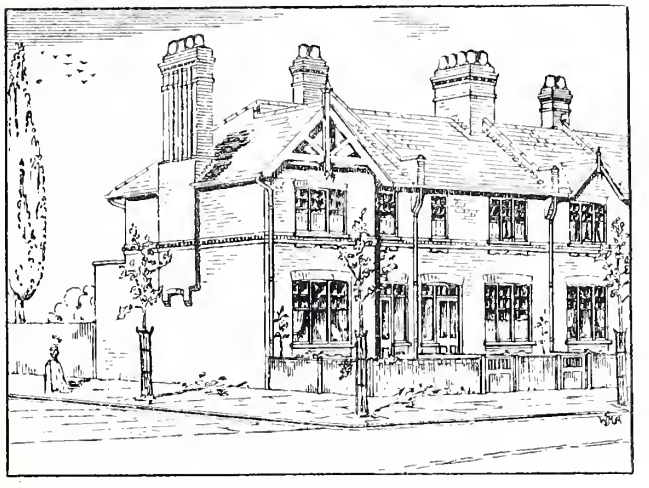

[*E. J. Lovegrove, M.I.C.E., Engineer and Surveyor.*

Class D. Cost per cube foot, $6\frac{1}{8}d.$
Rentals, 6*s.* 6*d.* per week inclusive.

This for London is a revolution in cottage building, and clearly indicates the thought, care, and real ability that the Surveyor must of necessity have put into this work.

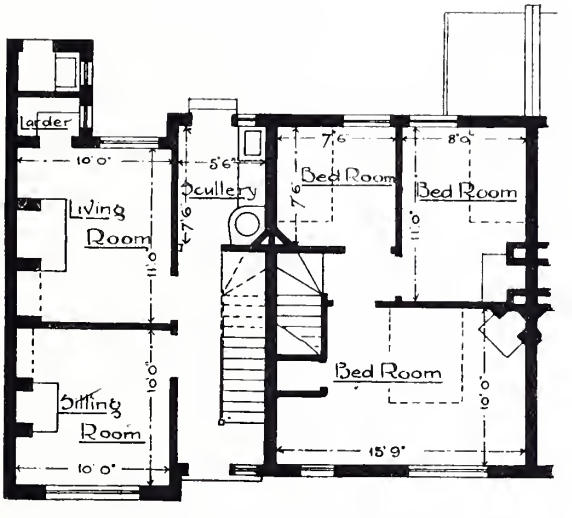
Comparing the Hornsey schemes—the first was confined to two classes of cottages, the second to three classes, and the third to four classes.

The last is in principle a more ideal method of dealing with the erection of workmen's cottages. There is a breadth in development which is helpful, not only in respect of finance, but also in providing for the requirements of the various classes of working men's families, and attention should be given to the highest rented cottage in the third scheme, providing as it does four bedrooms and a large sitting-room and living room, let to the working man with a wage-earning family, thus keeping in a comfortable home grown-up sons and daughters who, too frequently, are turned out early into the world, and, as a result, contract early and undesirable marriages which might have been avoided had the home surroundings been of a different character.

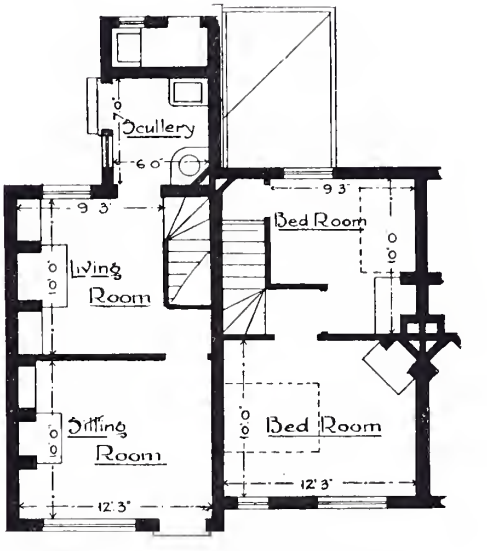


First Scheme.
Perspective Sketch of End of Terrace.

Do municipal undertakings of this kind pay? is a question often asked. The answer is afforded by the financial particulars hereunder.



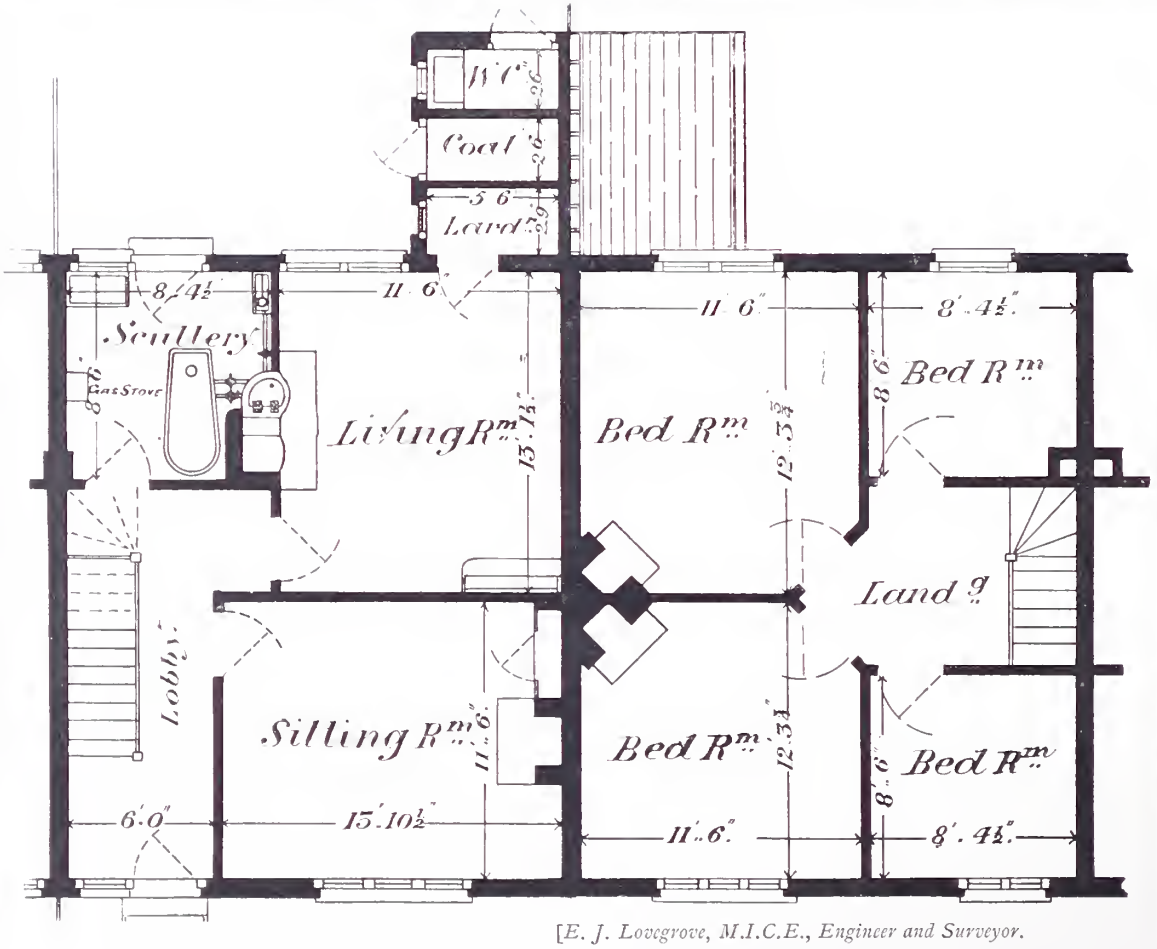

First Scheme.
Class B, 6*s.* 6*d.* a week inclusive rental.




First Scheme.
Class A, 8*s.* 6*d.* a week inclusive rental.

The Housing Committee and Corporation must be congratulated upon the excellent results of this undertaking, and for the splendid example they have been able to set to other municipalities, who are afraid to go beyond the adoption of Part III. of the Act for the "Housing of the Working Classes."

# HORNSEY CORPORATION WORKMEN'S DWELLINGS.




[E. J. Lovegrove, M.I.C.E., Engineer and Surveyor.

Class A. Cost per cube foot, 6*d*. Rentals, 11*s*. 3*d*. per week inclusive.

## Financial Particulars.

*Capital Expenditure.*

| | £ | s. | d. |
|---|---|---|---|
| Buildings, drainage, fencing, roads and sewers ... ... ... | 44,285 | 0 | 0 |
| Land—three acres.....£1,500<br>Land—three acres.....£1,800 (estimated value of land exchanged) | 3,300 | 0 | 0 |

*Annual Expenditure.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Annual repayment of capital and interest on £44,285 at $3\frac{3}{4}$ per cent. for 54 years at £4 6s. 8d. per cent. ... ... ... ... | | | | 1,919 | 0 | 4 |
| Ditto land, three acres, £1,500 at $3\frac{1}{2}$ per cent. for 60 years at £4 os. $2\frac{1}{2}d.$ per cent. ... ... ... | £60 | 2 | $9\frac{3}{4}$ | | | |
| Land exchanged, estimated value, three acres, at £600, equal to £1,800 at $3\frac{1}{2}$ per cent. for 60 years at £4 os. $2\frac{1}{2}d.$ per cent. ... ... ... ... | 72 | 3 | $4\frac{1}{2}$ | | | |
| | | | | 132 | 6 | 2 |
| Rates, taxes and water at 22 per cent. of rental value ... ... | | | | 692 | 8 | 1 |
| Empties and repairs at 10 per cent. of rental value ... ... | | | | 314 | 14 | 7 |
| Contingencies ... ... ... ... ... ... ... ... | | | | 88 | 16 | 10 |
| | | | | £3,147 | 6 | 0 |

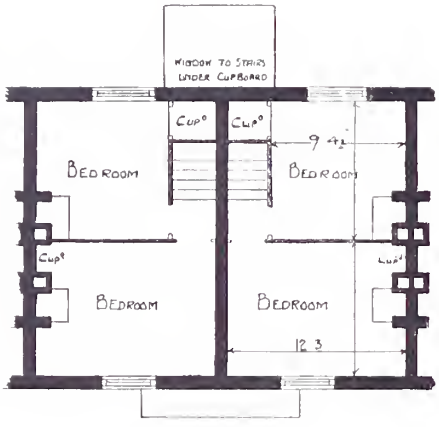
*Annual Income.*

| | £ | s. | d. | | | |
|---|---|---|---|---|---|---|
| 26 Class "A" at 11*s.* 3*d.* ... ... ... | 14 | 12 | 6 | | | |
| 40 Class "B" at 9*s.* 6*d.* ... ... ... | 19 | 0 | 0 | | | |
| 38 Class "C" at 8*s.* ... ... ... ... | 15 | 4 | 0 | | | |
| 36 Class "D" at 6*s.* 6*d.* ... ... ... | 11 | 14 | 0 | | | |
| | 60 | 10 | 6 | by 52 ... | £3,147 | 6 | 0 |

Cost per foot cube is as follows:—

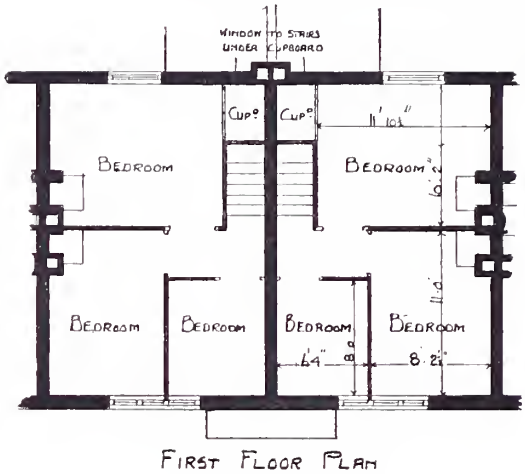
| | |
|---|---|
| Class "A" ... ... ... ... | 6*d.* |
| Class "B" ... ... ... ... | $6\frac{1}{4}d.$ |
| Class "C" ... ... ... ... | $6\frac{1}{4}d.$ |
| Class "D" ... ... ... ... | $6\frac{1}{8}d.$ |

## TYPE A.

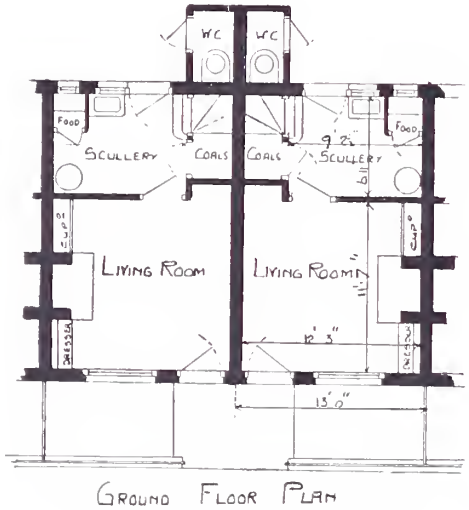



FIRST FLOOR PLAN

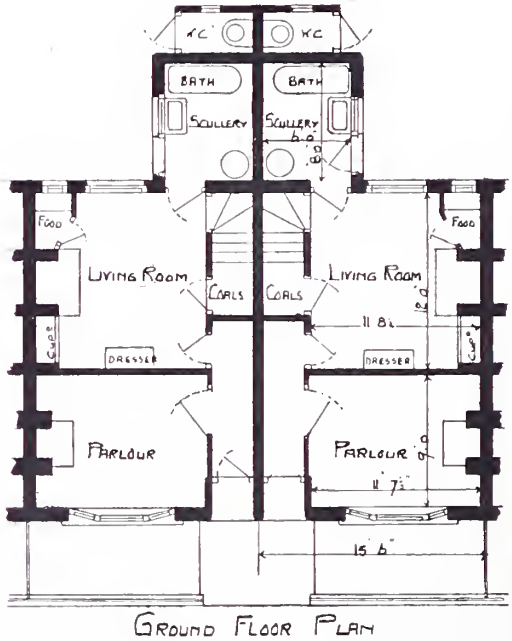
## TYPE D.




FIRST FLOOR PLAN




GROUND FLOOR PLAN




GROUND FLOOR PLAN

SCALE 10 5 0 10 20 30 40 50 FEET

Cost, £190 each—7*d.* per cube foot.

Rental, 6*s.* 6*d.* a week inclusive.

Cost, £250 each—7*d.* per cube foot.

Rental, 7*s.* 9*d.* a week inclusive.

*Geo. F. Carter, A.M.I.C.E.,*
*Engineer and Surveyor.*

Type A. Type D.

# COUNTY BOROUGH OF CROYDON.

The County Borough of Croydon adopted Part III. of the "Housing of the Working Classes Act" in 1901, and two years ago the Borough Engineer received instructions to prepare plans for the erection of workmen's dwellings on a site containing over three acres, situate at Woodside, about a mile from the centre of the town. Eighty-six houses and one house and shop have been built, the houses classified as types "A" and "D."

The exceptionally low cost of the site enabled the Surveyor in laying out the estate to deal generously with the land allotted to each house. The houses are set back 6 feet and enclosed with oak palings or iron railings on dwarf walls. All the partition walls throughout the scheme are of "Mack" partitioning, manufactured by Messrs. J. A. King & Co., 181, Queen Victoria Street, E.C.; the net thickness of the slabs is 2 inches and when plastered $2\frac{1}{2}$ inches, and it is interesting to note that the Surveyor prefers this system of construction to either ordinary $4\frac{1}{2}$-inch walls or stud partitioning, as it has proved in every way satisfactory, and, while the cost is about the same, it saves room; nails can be driven into it upon which to hang pictures without damaging the surrounding surface. It is fire and vermin proof, and has been tested by the British Fire Prevention Committee to over 2,250 degrees Fahr. These partitions will also carry considerable weights.

The treatment of the elevation is pleasing and inexpensive, the doorways are relieved by artificial stone heads, and the eaves line is broken by one or two gables in each block. The buildings themselves are of a very substantial character. The planning is excellent, and the tenants should be well satisfied with the comforts and conveniences to be found in them. The cost of building type "A" is £190 each, and the contents are 6,561 cubic feet, which gives a ratio of 7*d*. per cube foot; the rent is 6*s*. 6*d*. per week inclusive. The cost of type "D" is £250 each, and the contents are 8,943 cubic feet. The houses are let at 7*s*. 9*d*. and 8*s*. respectively.

The Local Government Board have allowed 80 years for the repayment of the loan on the land and 56 years on the buildings.

The undertaking will be wholly self-supporting, as the financial particulars show, and reflects the greatest credit upon the Borough Council and their Engineer, Mr. Geo. F. Carter, A.M.I.C.E., who has successfully carried out the entire scheme.

## Financial Particulars.

### Estimate of Cost.

| | £ | s. | d. |
|---|---|---|---|
| Land, 3 acres at £500 | 1,550 | 0 | 0 |
| 40 houses (type "A") at £190 | 7,600 | 0 | 0 |
| 46 houses (type "D") at £250 | 11,500 | 0 | 0 |
| One house and shop | 350 | 0 | 0 |
| Sewering and forming roads | 2,000 | 0 | 0 |
| Contingencies | 350 | 0 | 0 |
| | £23,350 | 0 | 0 |

### Income—

| | £ | s. | d. |
|---|---|---|---|
| By rents— | | | |
| 40 houses at 6s. 6d. per week (£16 18s. 11d.) | 676 | 16 | 8 |
| 29 houses at 7s. 9d. per week (£20 4s. 1d.) | 585 | 18 | 5 |
| 17 houses at 8s. per week (£20 17s. 1d.) | 354 | 10 | 5 |
| 1 house and shop, £35 per annum | 35 | 0 | 0 |
| | £1,653 | 5 | 6 |

### Expenses—

| | | | | £ | s. | d. |
|---|---|---|---|---|---|---|
| Land— | | | | | | |
| Interest and sinking fund on loan, £1,550 over 80 years | | | | 69 | 14 | 0 |
| Buildings, roads and sewers— | | | | | | |
| Interest and sinking fund on loan, £21,800 over 56 years | | | | 997 | 18 | 1 |
| Rates— | | | | | | |
| 40 houses at £3 4s. 4d. | £128 | 13s. | 4d. | | | |
| 46 houses at £4 0s. 8d. | 185 | 10s. | 8d. | | | |
| | | | | 314 | 4 | 0 |
| Taxes— | | | | 62 | 16 | 6 |
| Insurance— | | | | | | |
| 40 houses at 2s. 3d. | £4 | 10s. | 0d. | | | |
| 46 houses at 3s. | 6 | 18s. | 0d. | | | |
| House and shop | | 5s. | 3d. | | | |
| | | | | 11 | 13 | 3 |
| Leaving for repairs, management, collection, etc. 13½ per cent. | | | | 196 | 19 | 8 |
| | | | | £1,653 | 5 | 6 |

# THE ARTIZANS', LABOURERS' AND GENERAL DWELLINGS COMPANY, LIMITED.

*Directors.*

ERNEST NOEL, ESQ., *Chairman.*

SIR RICHARD FARRANT, *Deputy-Chairman and Managing Director.*

HON. CECIL ASHLEY.
SIR THOMAS HEWITT, K.C.
MARK H. JUDGE, ESQ.
JOHN KEMPSTER, ESQ.
REV. H. V. LE BAS, M.A.
THE RT. HON. THE EARL OF PORTSMOUTH.
MAURICE POWELL, ESQ.
THOMAS WEBB, ESQ.

*Secretary.*
MR. T. DULAKE.

*Surveyor.*
MR. G. J. EARLE.

THIS Company was formed in 1867 with an authorised capital of £250,000, its principal object then being the acquisition of freehold estates in the near suburbs of London, and the building thereon small cottages for artizans and the working classes generally. In 1885 the Company decided to include within its scope the erection of block buildings in central parts of London.

The operations of the Company and the issue of capital have extended until it has now considerably over Two Millions and a Half sterling invested in its various estates.

The cottages are of five classes, at weekly rentals ranging from 5*s.* 9*d.* to 12*s* 6*d.* There are also double-tenement houses with complete separate accommodation for two families at rentals of from 5*s.* to 8*s.* 6*d.* In addition to this the Company is developing one of its estates with better class houses at higher rentals. The block buildings are arranged in tenements of one, two, and three rooms and a few sets of four and five rooms.

The architectural elevations of the buildings are of a more handsome character than is generally adopted for buildings of this class. The rentals are based upon an average of 2*s.* 9*d.* per room

for most of the tenements. Some exceptionally large rooms or tenements in special positions are let at higher rentals.

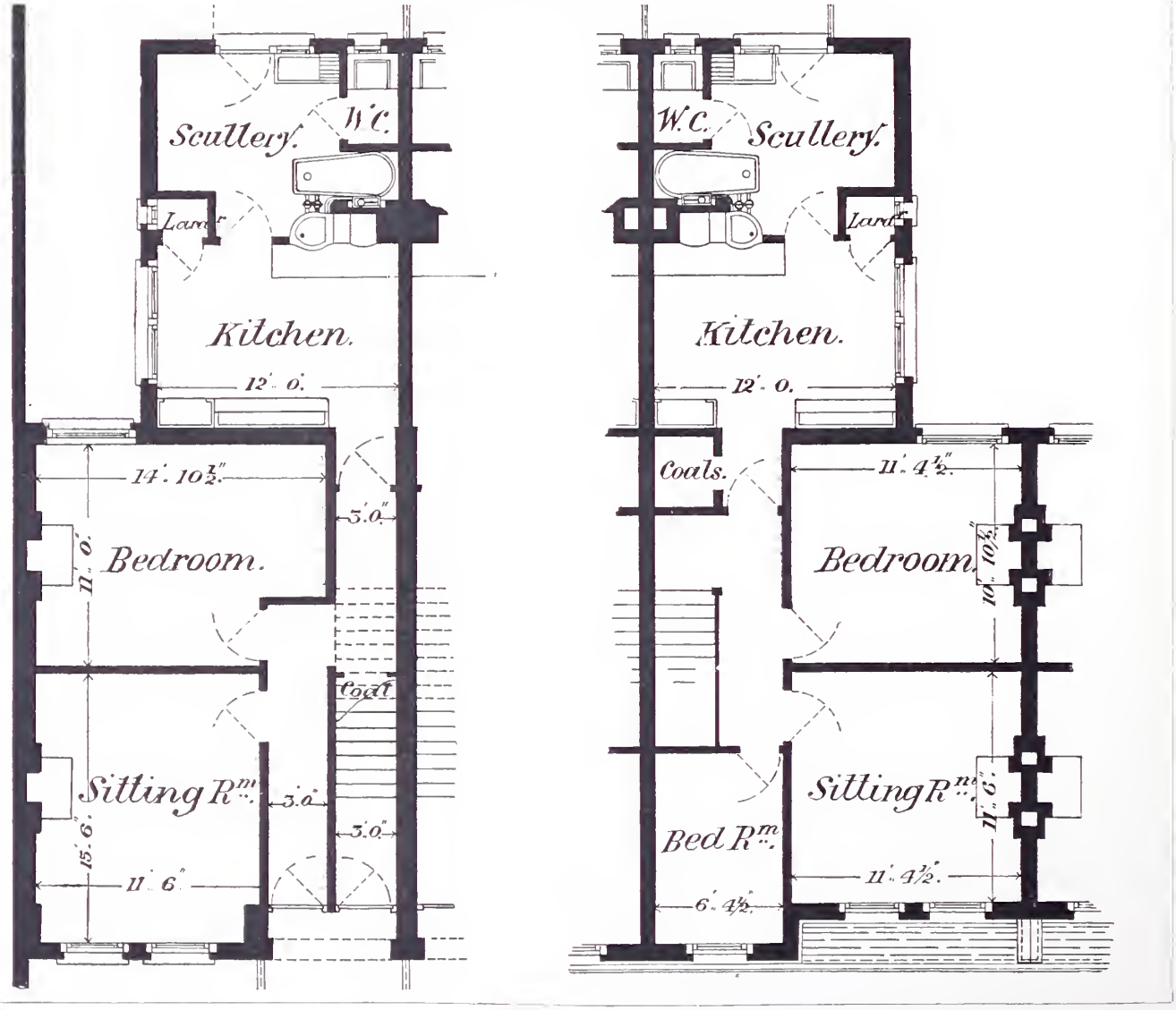
The properties of the Company are situate in London and comprise no less than fourteen estates, amongst them being Shaftesbury Park Estate, Battersea, S.W., consisting of 42½ acres; Queen's Park, Harrow Road, W., 76 acres; Streatham Hill, S.W., 66 acres; and Noel Park, Wood Green, N., 100 acres.

These estates make provision for 8,000 families, and the gross income for 1903 amounted to £189,000, which, after taxes and repairs had been provided for, left a net revenue of £130,000. This enabled the Directors to pay a dividend of 5 per cent. free of income tax to the ordinary shareholders, and 4½ per cent. to the preference shareholders.

To this successful Company the great Metropolis is indebted for the housing of above 50,000 people under conditions that are most commendable and praiseworthy. Possessed of an excellent "Board of Directors" under the able chairmanship of Ernest Noel, Esq., and with Sir Richard Farrant as Managing Director, the Company enjoys the confidence of its shareholders to an exceptional degree, whilst for Sir Richard's devotion and great ability, extending over a period of 27 years, the shareholders will ever feel grateful.

Mr. G. J. Earle, Surveyor, is also playing an important part in the Company's welfare. His skill and business ability have contributed largely to the better housing of the community, not only

THE ARTIZANS' LABOURERS' AND GENERAL DWELLINGS CO., LIMITED.
NOEL PARK ESTATE.

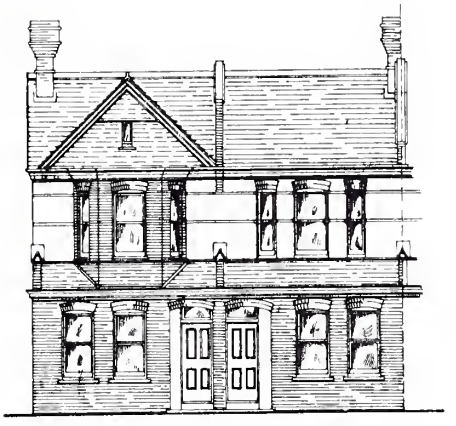



[G. J. Earle, Surveyor.

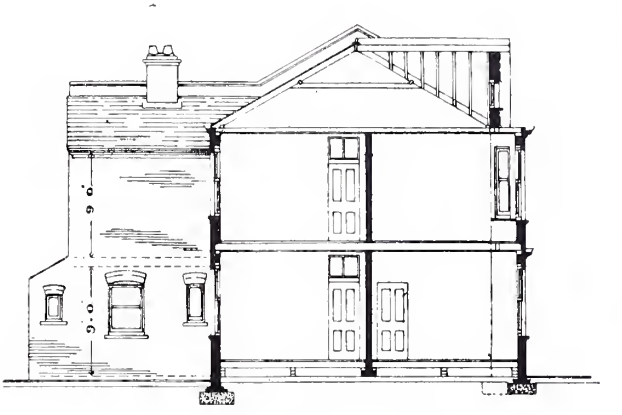
Cost per foot cube, about 6½d. Rentals, 7s. and 8s. a week respectively, exclusive of rates and taxes.

# The G.L. & G.D. Co.y Ltd. Noel Park Estate, Wood Green. N.

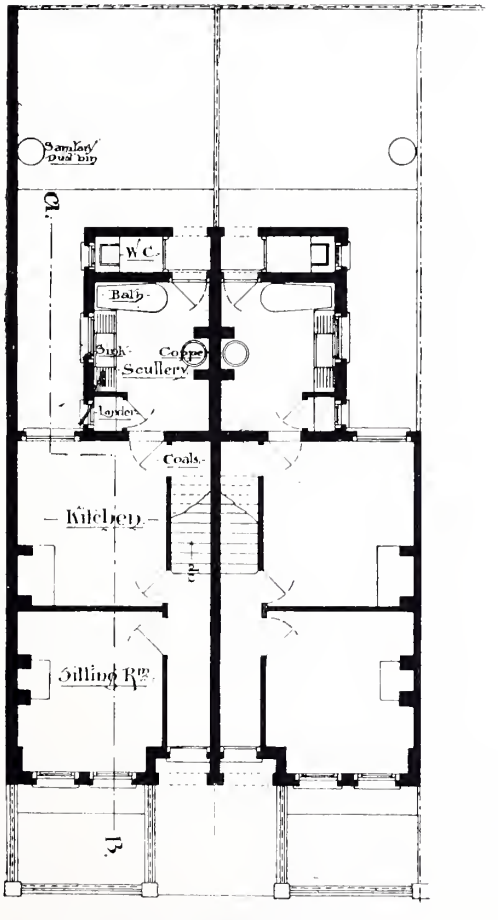
## Houses in Lymington Avenue.



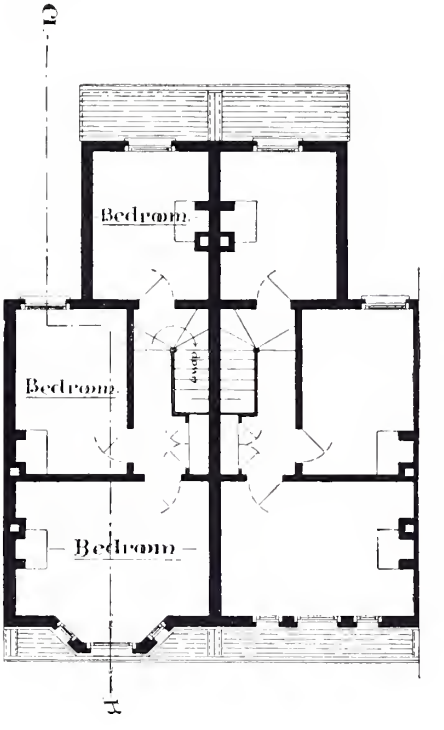
Front Elevation




Section on line C.B




Ground Floor Plan




First Floor Plan

[G. J. Earle, Surveyor.

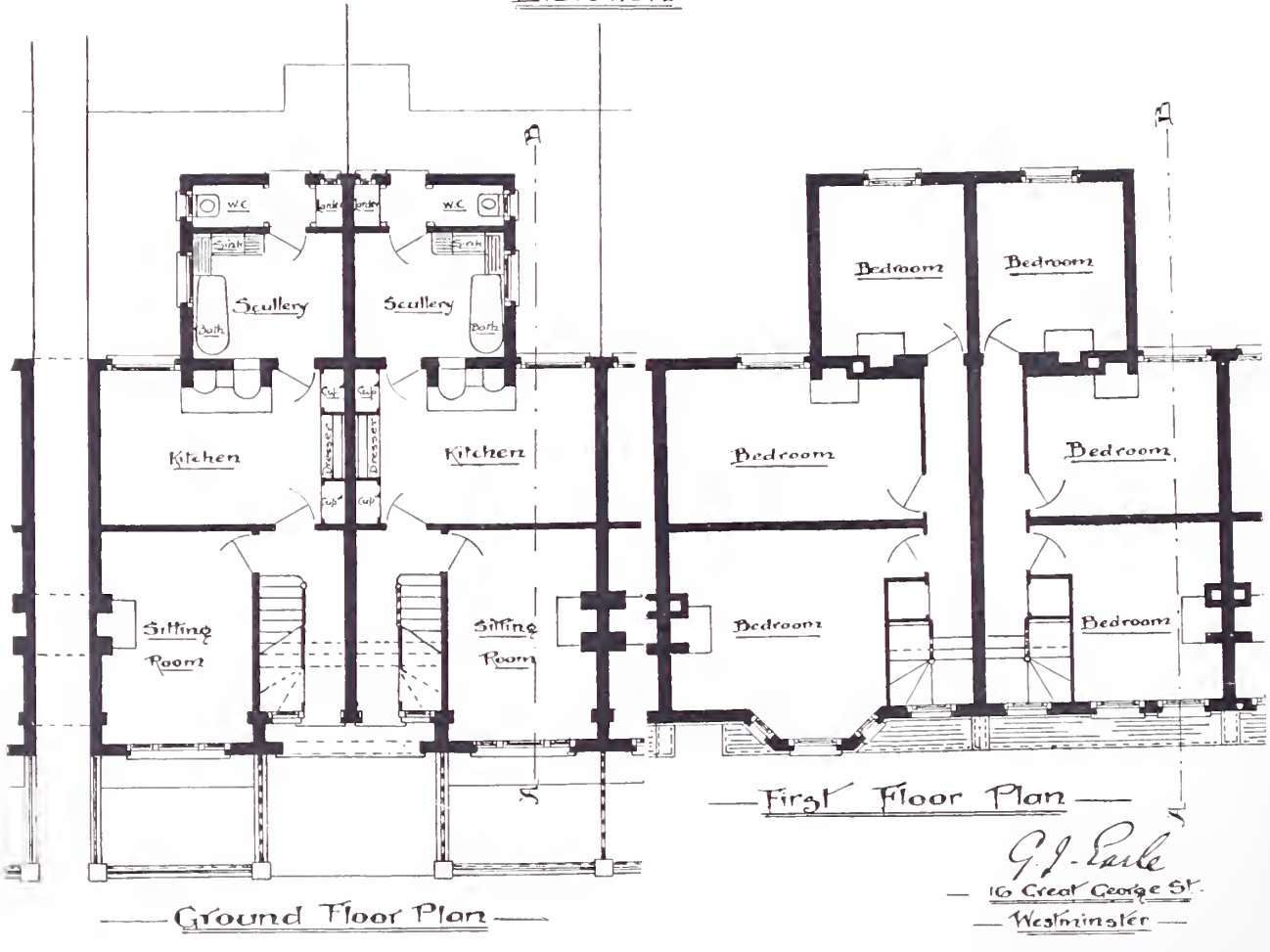
Cost, about 6½*d.* to 7*d.* per foot cube. Rentals, 8*s.* 9*d.* a week, exclusive of rates and taxes.

# The A.L. & G.D.Co.Ltd. Noel Park Estate, Wood Green N.

## — Proposed houses in Mark Road —

### Block 3.

— Elevation —




Cost, 6½*d.* to 7*d.* per foot cube. Rentals not fixed, but probably 9s. to 10s. per week, exclusive of rates and taxes.

in the Company's undertakings but also in those of Rowton Houses, Ltd. (see page 29). The "Poor Men's Hotels" of the latter are amongst the first of London's magnificent piles of housing achievements, and are being carried out under the same auspices, Sir R. Farrant being chairman.

Building operations were re-commenced last year at Noel Park, and the whole of the undeveloped portion of the estate is now being laid out. Already 102 tenements have been built as shown in the plan and illustration, and several hundred separate cottages are either completed or in course of erection.

These dwellings are well planned and exceedingly well built. They afford every comfort and convenience, and are fitted with Cornes & Haighton's apparatus. The tenants speak in the highest terms of the houses in which they live.

The rents vary from 5*s.* 9*d.* to 9*s.* 6*d.* a week, exclusive of rates.

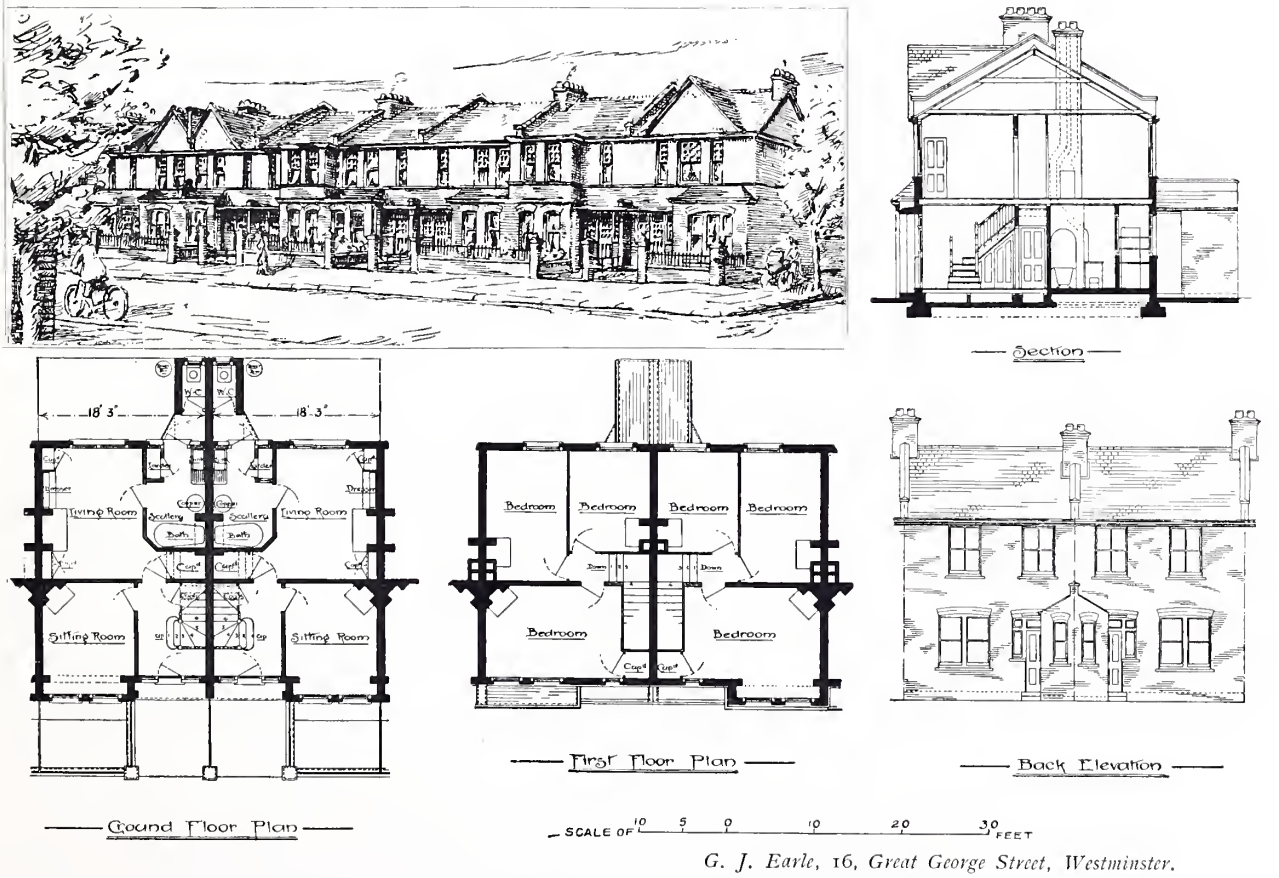
The houses have a forecourt and a nice strip of garden in the rear, and are of five classes:—

| | | | | £ |
|---|---|---|---|---|
| The | 1st class | has 8 | rooms, and the cost of building was | 350 |
| ,, | 2nd class | ,, 7 | ,, ,, ,, ,, ,, | 280 |
| ,, | 3rd class | ,, 6 | ,, ,, ,, ,, ,, | 240 |
| ,, | 4th class | ,, 5 | ,, ,, ,, ,, ,, | 200 |
| ,, | 5th class | ,, 4 | ,, ,, ,, ,, ,, | 180 |

The cost per foot cube now is approximately 6½*d.*

The Company is possessed of a large modern and well-equipped works department, splendidly organised, where the materials which are bought wholesale are manufactured in the cheapest and best possible manner.

Many deputations are privileged to look over these estates, and the writer recalls quite recently a visit paid by Mr. Joseph Howard, M.P., the members of the Wood Green Council, Mr. Phipps the American millionaire, and a nobleman who evinces a keen interest in the housing of the working classes, namely, Baron Rothschild (of Paris).




*G. J. Earle, 16, Great George Street, Westminster.*

Proposed Houses, Noel Park Estate, without back additions.

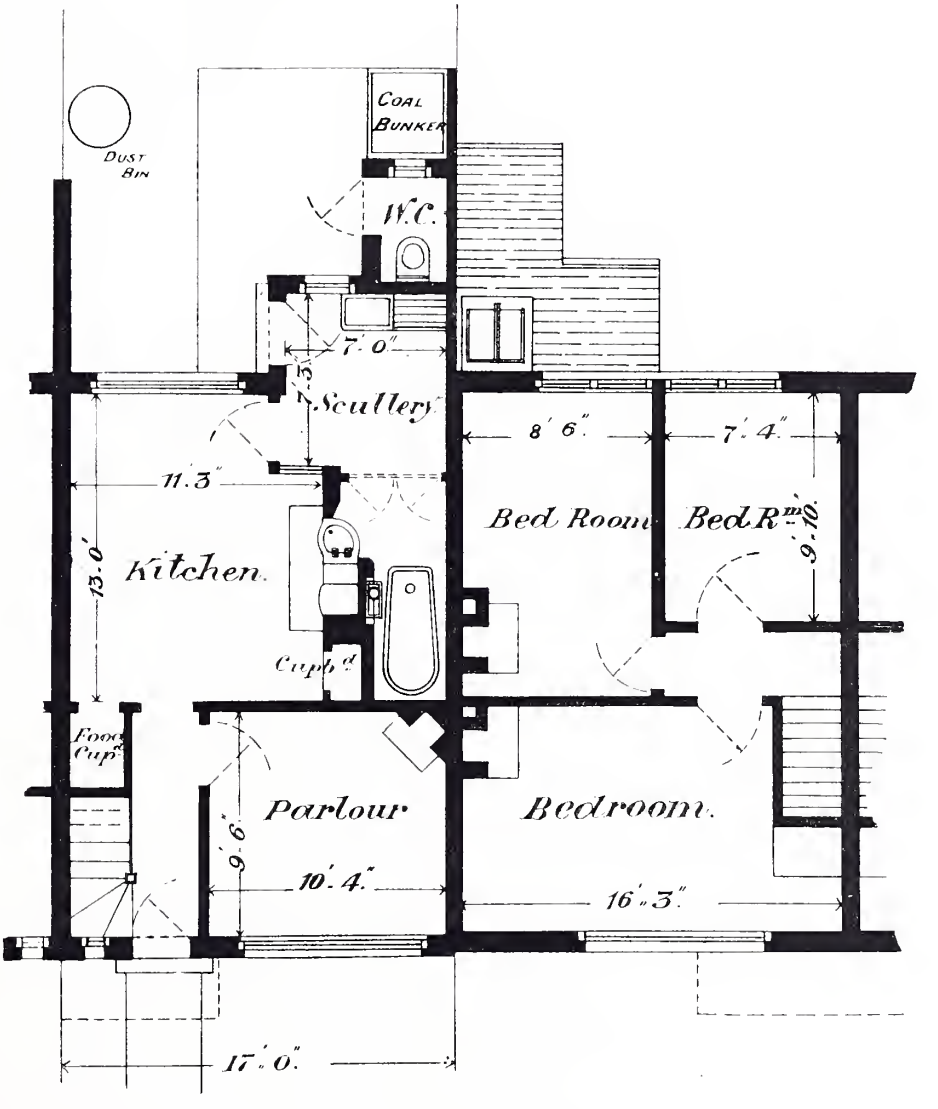
# LONDON & SOUTH-WESTERN RAILWAY CO.'S COTTAGES AT EASTLEIGH.

Rents, 6s. per week inclusive.

# LONDON & SOUTH-WESTERN RAILWAY COMPANY.

One of the first railway companies in the country to house their workpeople on what may be described as model village lines is the London & South-Western. At Eastleigh, near Southampton, this Company owns a large estate of many acres, upon which they have already built a Locomotive Depôt, and are at the present time engaged in the erection of locomotive works, it being their intention to remove the present works, etc., from Nine Elms to Eastleigh.

In all probability fifteen hundred workpeople will be transferred to the last named place as the result of this movement. The occasion affords a fit opportunity for housing the employees under modern conditions, and the Company are setting aside many acres upon which to build cottages. Already they have made a beginning by building fifty-four model dwellings for the men engaged in the new depôt, upon principles which are most commendable and afford a splendid example.




6s. per week inclusive rental.

A road of very considerable length has been made through the estate, linking into the main road, which leads to the station, and at the further end of it, on either side of the road, the cottages referred to are built. The houses, which are formed in blocks of six, have each a frontage of 17 ft. and are set back from the road 15 ft., with a forecourt on both sides of the street. The elevations, whilst not

being costly, are pleasing and attractive and certainly have a village-like effect. For all external work a local red sand brick has been used. There are four gables to each block and a lean-to over each front door, the distance between each block being 15 ft.

The usual outer wing at the back of the cottages, which excludes so much light and air, is dispensed with in the houses under notice, and the back elevation is almost as pleasing as the front.

On entering the houses one is instantly impressed by the pleasing appearance of the rooms, the windows being exceptionally large, admitting a plentiful supply of light. The accommodation to be found in these houses is ideal, for besides a parlour and entrance lobby, there are a spacious kitchen, larder, separate bath-room, scullery and three bedrooms, and the whole is so arranged as to be an embodiment of comfort and convenience to the occupants.

Each house is fitted with Cornes & Haighton's apparatus, and a glass partition on one side of the range forms a semi-ingle, whilst on the other side is a cupboard extending from the floor to the ceiling. The height of the rooms on the ground floor is 8 ft. 6 in. and the bedrooms 9 ft. The cubical contents of the front bedroom is 1,225 cubic feet, and the smallest 619.

The whole of the area of each block is covered with a solid bed of concrete 18 in. thick. The party walls are 9 in., taken through the roof.

Under conditions such as these, local by-laws should be amended to save this unnecessary expenditure.

The scullery and bath-room walls are floated in cement, whilst the floors of the same are laid in "granolithic."

The fronts of the houses are enclosed by upright unclimbable iron fencing, as also the gardens at the rear. The gardens are about 52 ft. in depth by the width of the house, and they appear to be sufficient for the tenants and are much appreciated by them.

The rent charged by the Company is an inclusive one of six shillings weekly.

The local rates are six shillings in the £, and all branches of the building trade are paid a uniform rate of 8*d*. per hour, except labourers, who vary from 5*d*. to 6*d*.

# CITY OF BRADFORD.

## FAXFLEET STREET DWELLINGS.

Following upon a representation under the Act, made by the Medical Officer of Health of the City, that the area known as the "Longlands Insanitary Area" should be dealt with under Part I. of the Act as being unfit for human habitation, the Local Government Board held a local inquiry on the 21st February, 1902, and subsequently issued a Provisional Order giving effect generally to the scheme of the Corporation. The confirming Act of Parliament received the Royal assent on the 22nd July, 1902.

The Board imposed a condition that before any of the houses in the insanitary area were demolished a number of houses should be provided and completed fit for occupation. Consequently the Corporation have erected 66 dwelling-houses, suitable for artisans, in an area adjoining Faxfleet Street, in the West Bowling Ward. These houses are "through" houses, each having a small yard at the back; they comprise five blocks, and all are occupied.

In arranging the plan of these cottages, the Committee have been chiefly concerned to provide such conveniences as are needed for a family of the artisan class, and to adjust the rent at the lowest possible figure which will cover interest at the rate of $3\frac{1}{4}$ per cent. on the capital outlay and repay this outlay in sixty years.

The houses are set back from the footpath 6 ft. and are enclosed by a dwarf wall with iron railings secured to stone coping.

The following accommodation is provided:—Living-room, 14 ft. by 13 ft. 10 in.; scullery, 9 ft. 6 in. by 6 ft. 9 in., fitted with sink, set pot, and bath; there are two bedrooms on the first floor which measure respectively 13 ft. 10 in. by 10 ft. and 10 ft. 8 in. by 8 ft. 3 in., and a further bedroom in the roof which measures 13 ft. 10 in. by 12 ft. 10 in. and is lighted by a dormer window. The work is of a substantial character, stone facings usually known as "insides" wallstones have been used in the external work, and the roofs are covered with green slates.

It is satisfactory to find that the City Council have by this undertaking shown that "through" houses can be provided in Yorkshire at low rentals and can be made self-supporting, thus demonstrating that back-to-back houses need not be multiplied. The whole scheme has been planned and carried out by the City Architect, Mr. F. E. P. Edwards, A.R.I.B.A., and appears to be a very successful undertaking.

### Financial Particulars.

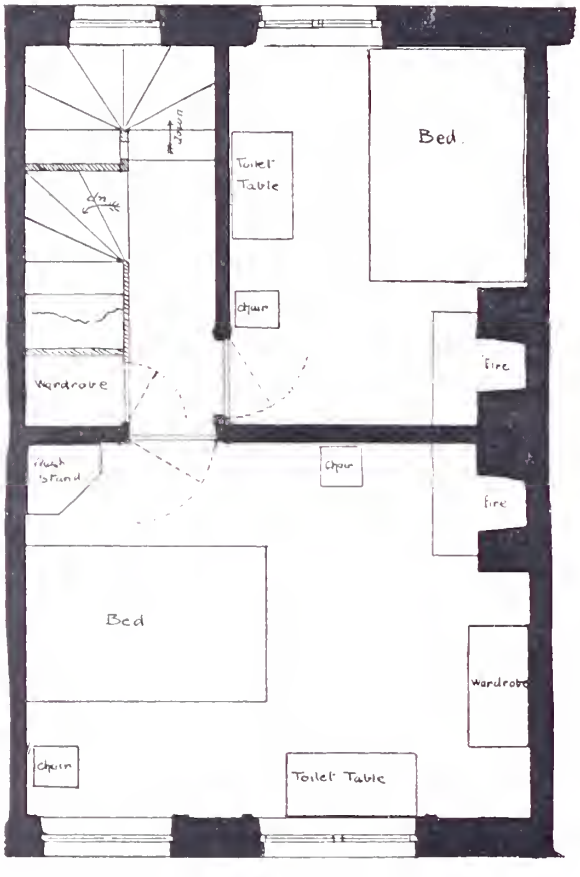
The cost per house—Land, £28 11*s.* 6*d.*; buildings, £183 0*s.* 6*d.*; street works (nearly completed), £28 8*s.*; establishment charges, covering the cost of the Architect's Department and Clerk of Works, £7 4*s.*; making a total cost per house of £247 4*s.* Interest and sinking fund, reckoned at the rate of $3\frac{1}{4}$ per cent. on the basis of repayment in sixty years, representing a yearly charge of £9 8*s.* 2*d.* per house.

Other items are—Poor rate (5*s.* 6*d.* on the annual rateable value, £8 10*s.*), £2 6*s.* 9*d.*; district rate, at 1*s.* $7\frac{1}{2}$*d.* net, 13*s.* 10*d.*; water, 15*s.* less 10 per cent. discount, 13*s.* 6*d.*; bath and water-closet, 3*s.* each, 6*s.*; repairs and leakages, 17*s.* 9*d.*; a total of £4 17*s.* 10*d.* With £9 8*s.* 2*d.* added to this for interest and sinking fund the total is £14 6*s.* per year; in other words, the exact equivalent of 52 weeks' rent at 5*s.* 6*d.* per week.

The cost of the buildings per cubic foot is $4\frac{1}{2}$*d.* (about). The total cost is £16,315 4*s.*

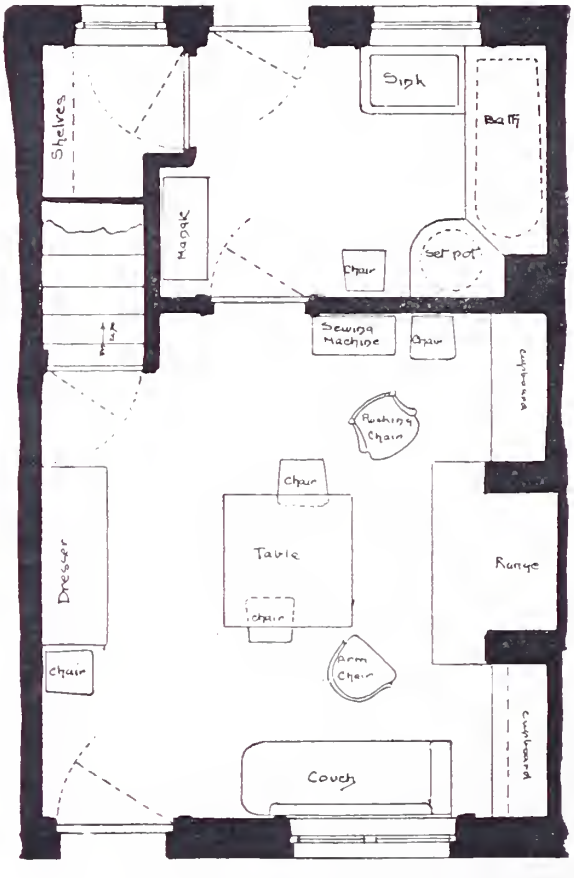
# CITY OF BRADFORD WORKMEN'S DWELLINGS.

FRONT VIEW.




SECOND FLOOR PLAN.

Feet




GROUND FLOOR PLAN.

Feet

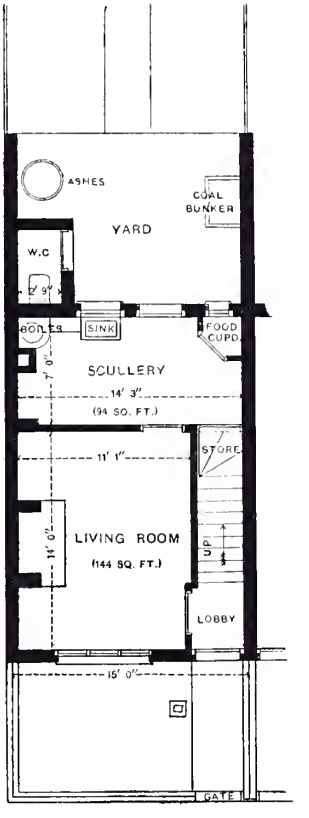
[*F. E. P. Edwards, A.R.I.B.A., City Architect.*

Cost of building, £190. Cost per foot cube, $4\frac{1}{2}d$. Rentals, 5*s*. 6*d*. a week inclusive.

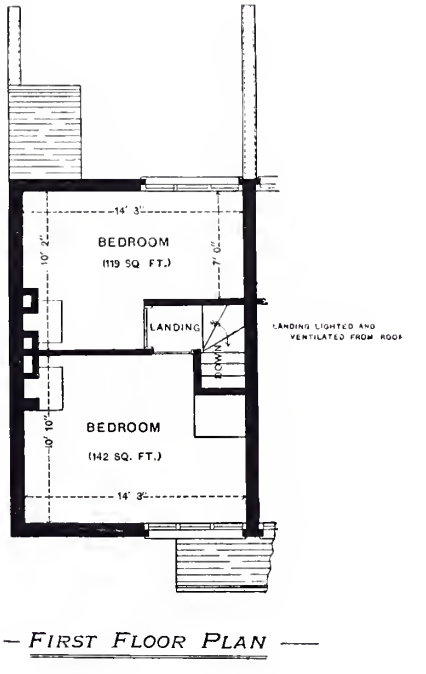
# CITY OF MANCHESTER.

In the year 1889, the City Council decided to apply the provisions of "The Artisans' and Labourers' Dwellings Improvement Acts" to certain unhealthy areas of the city, and the passing of the "Housing of the Working Classes Act, 1890," facilitated the work in this direction. The Manchester and Salford Sanitary Association memorialised the City Council and made strong representations of the danger to the health and lives of the public if these "hotbeds of disease" were allowed to remain. The Sanitary Committee, realising their enormous responsibility, caused the Act to be applied to close upon six thousand houses, and within 10 years had invested no less a sum than three hundred thousand pounds in the various schemes adopted for the re-housing of the dispossessed. Needless to say, a great reduction has taken place in the rates of mortality, and the occupants of the new premises, which are of two kinds, viz.: tenements and self-contained houses, are now living under conditions which testify to the business-like methods which characterise the work of the City Council.

All classes appear to have been catered for. The rentals per room of the tenements run from 1*s.* 9*d.* to 3*s.* a week, and that of a cottage in the heart of Manchester 7*s.* 9*d.* a week inclusive.




— GROUND FLOOR PLAN —




— FIRST FLOOR PLAN —

Manchester may be looked upon as the pioneer Corporation for dealing with this subject on "model village" lines, for in January, 1900, they decided to purchase the Blackley Estate, consisting of about 245 acres, for the sum of £36,646, or roughly £150 an acre. Situated within about 4½ miles of the city, with a cheap and rapid means of transit which can easily be provided by their modern electric tramways, the problem should here find a solution.

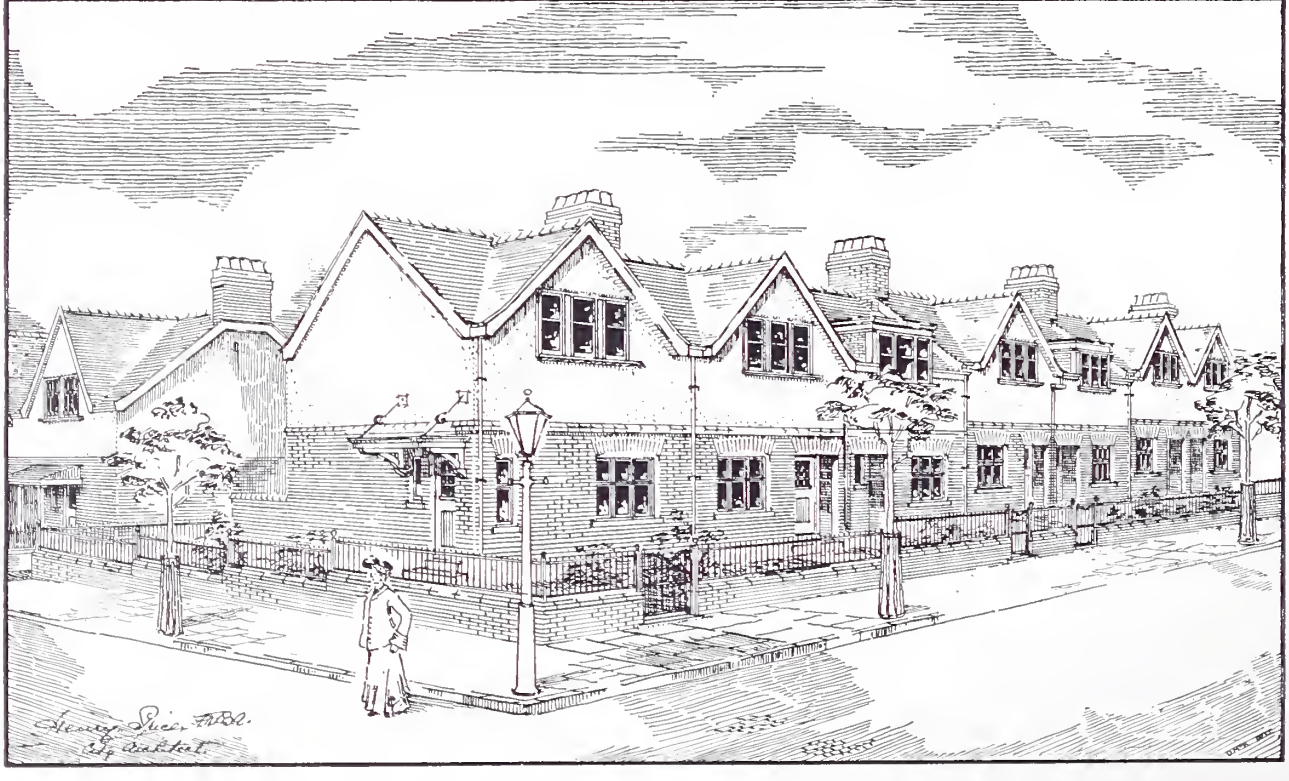
Lord Rosebery, speaking upon the subject, said he did not see why land could not be obtained by persons or corporations at agricultural values, so that houses might be built which could be let at cheap rents, and that by getting workmen's cheap trains to accommodate the tenants the difficulty of housing would be solved.

Closely connected with this important subject is the question of providing allotments, and the Committee have very wisely set aside 50 acres of land for the purpose. The City Architect, Mr. Henry Price, A.R.I.B.A., has prepared the plans and supervised the erection of the first 150 houses on this estate, but to attempt to emulate the examples of the model villages of Bournville and Port Sunlight has been no light task. The plans here illustrated show how thoroughly he has grasped the situation, succeeding in the idea of rural simplicity without introducing expensive and lavish ornamentation.

Having regard to the rentals of the houses, they are marvels of cheapness and convenience, and the Architect, Sanitary Committee, and City Council all alike deserve the highest congratulations upon the auspicious beginning they have thus made.

MANCHESTER CORPORATION HOUSING SCHEME BLACKLEY ESTATE DESIGN A

MANCHESTER CORPORATION HOUSING SCHEME BLACKLEY ESTATE DESIGN B

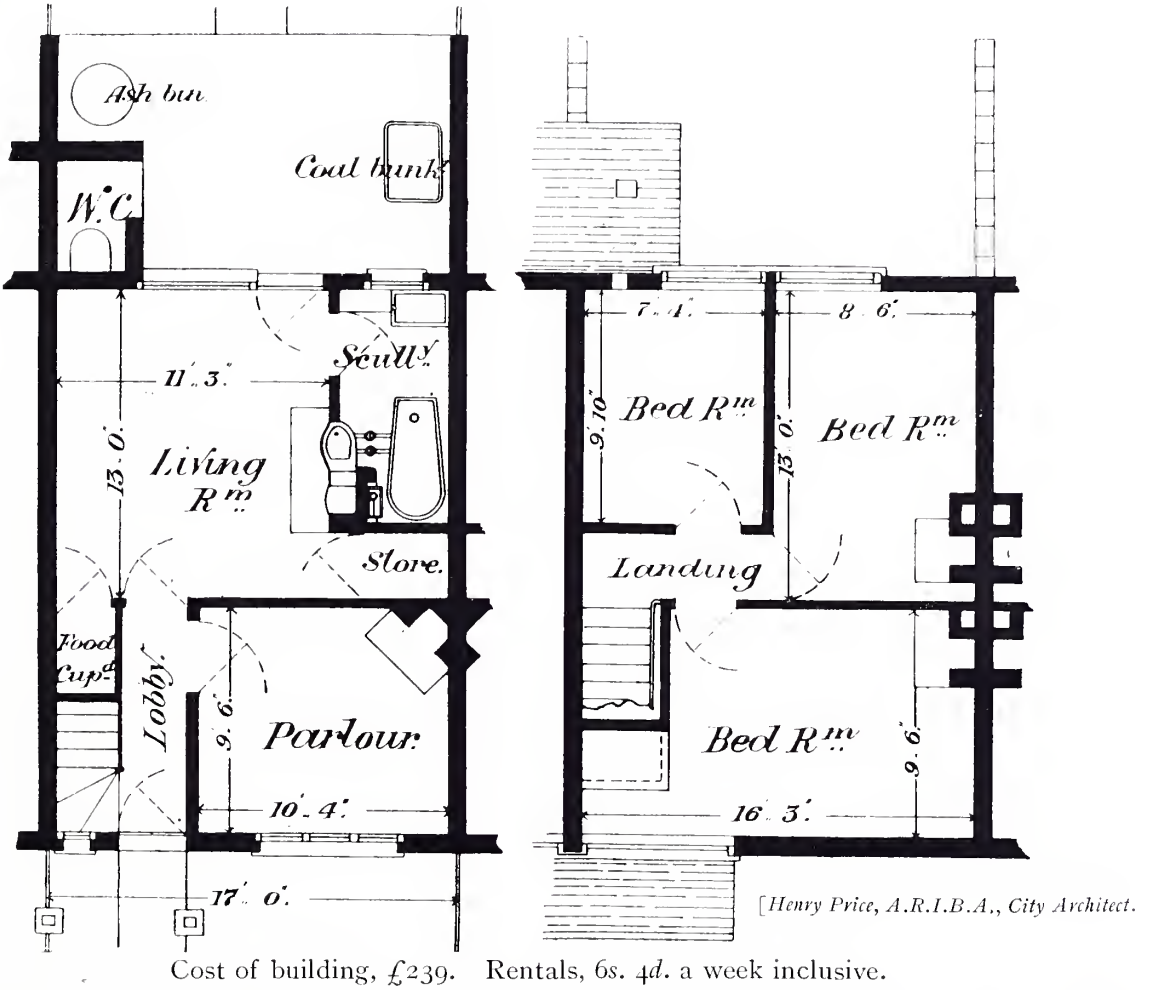


Many of the houses contain parlour, living-room, and scullery; others large living-room, bath-room and scullery, whilst none have less than three bedrooms. This variety of planning has been adopted with the idea of catering for the different needs of the applicants—a very wise provision.

The clear height of rooms on the ground floor is 9 ft., and the heights of the bedrooms average 9 ft. over two-thirds of the floor area and 7 ft. over the remaining one-third, which complies with the by-laws.

As far as possible the rooms and positions of doors, windows, etc., have been arranged with a view to the prevention of draughts and a fitting allocation of the furniture. Bath-rooms are provided in

DESIGN A.




[*Henry Price, A.R.I.B.A., City Architect.*

Cost of building, £239. Rentals, 6*s.* 4*d.* a week inclusive.

designs A. and C. similar to those in the "Model Cottages" at Leek. The various designs are distributed in such a way as to cause no weariness or monotonous repetition, and the lowering of the eaves and the introduction of gables and dormers, with the excellent forecourts and the building of the houses in blocks of not more than six, present a picture seldom seen in municipal housing.

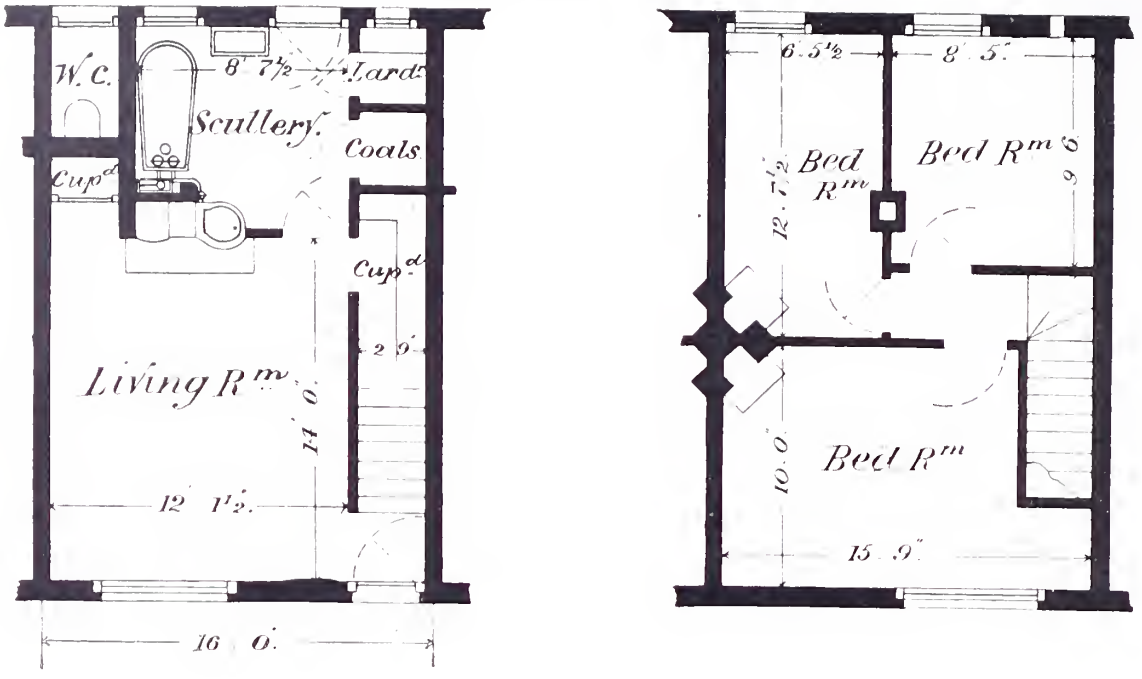
| FINANCIAL PARTICULARS. | £ | *s.* | *d.* |
|---|---|---|---|
| Estimated cost of building 150 houses ... ... ... ... ... | 48,570 | 0 | 0 |
| Estimated cost of street work, sewering, etc. ... ... ... ... | 14,167 | 0 | 0 |
| | £62,737 | 0 | 0 |

The estimated average cost per house is £239.

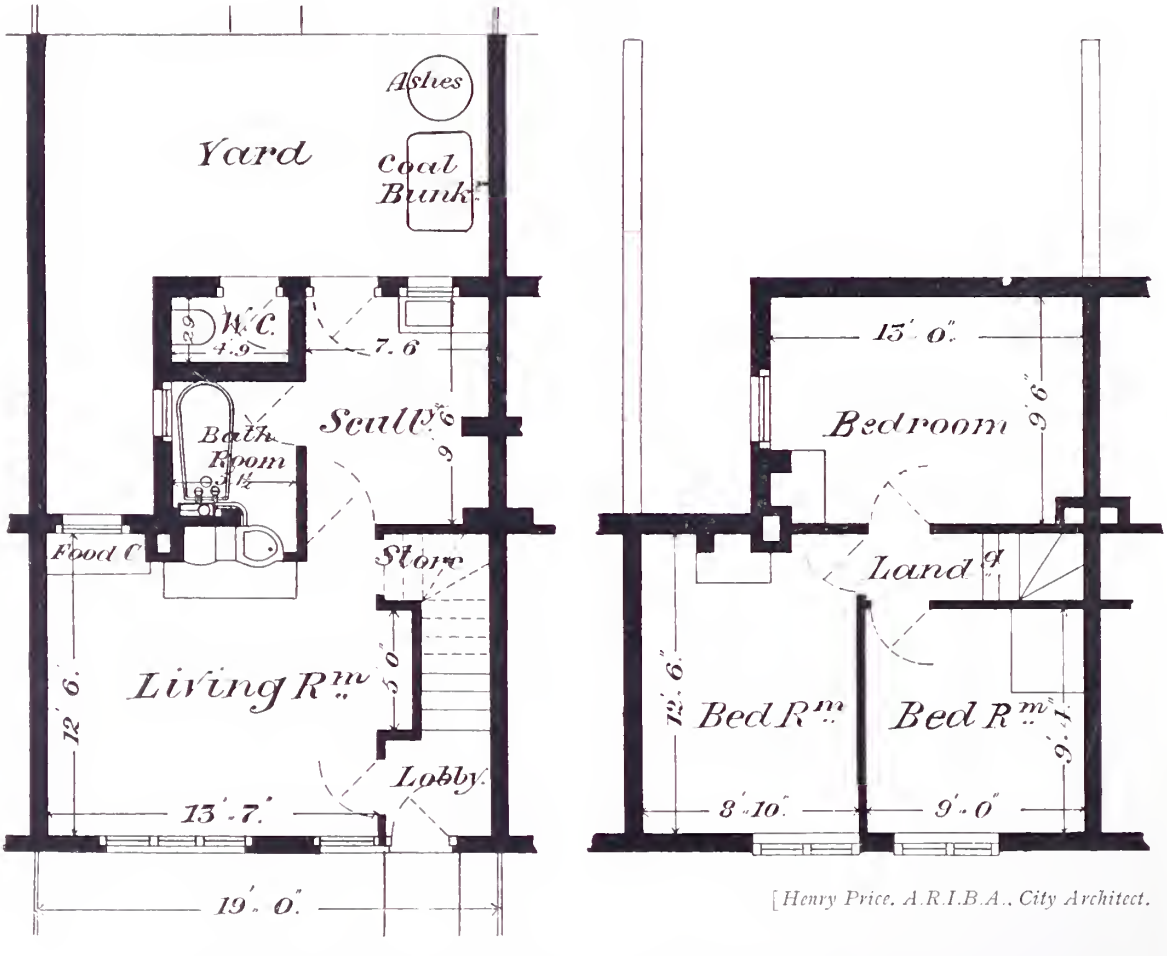
The rent of the houses in Victoria Avenue (which is 60 ft. wide) is 7*s.* a week each; similar houses in the side streets are 6*s.* 4*d.* inclusive. Some months ago a deputation of gentlemen from Toronto, interested in this subject, paid a visit to England to see examples of housing, and, as a result of their visit to Blackley, *The Toronto World* gives particulars of cottages intended to be built in that city, which are taken from design A.

In housing, as in everything else, "imitation is the sincerest form of flattery," and to the City Corporation the Toronto workers must ever feel indebted.

## MANCHESTER CITY CORPORATION.




DESIGN C.

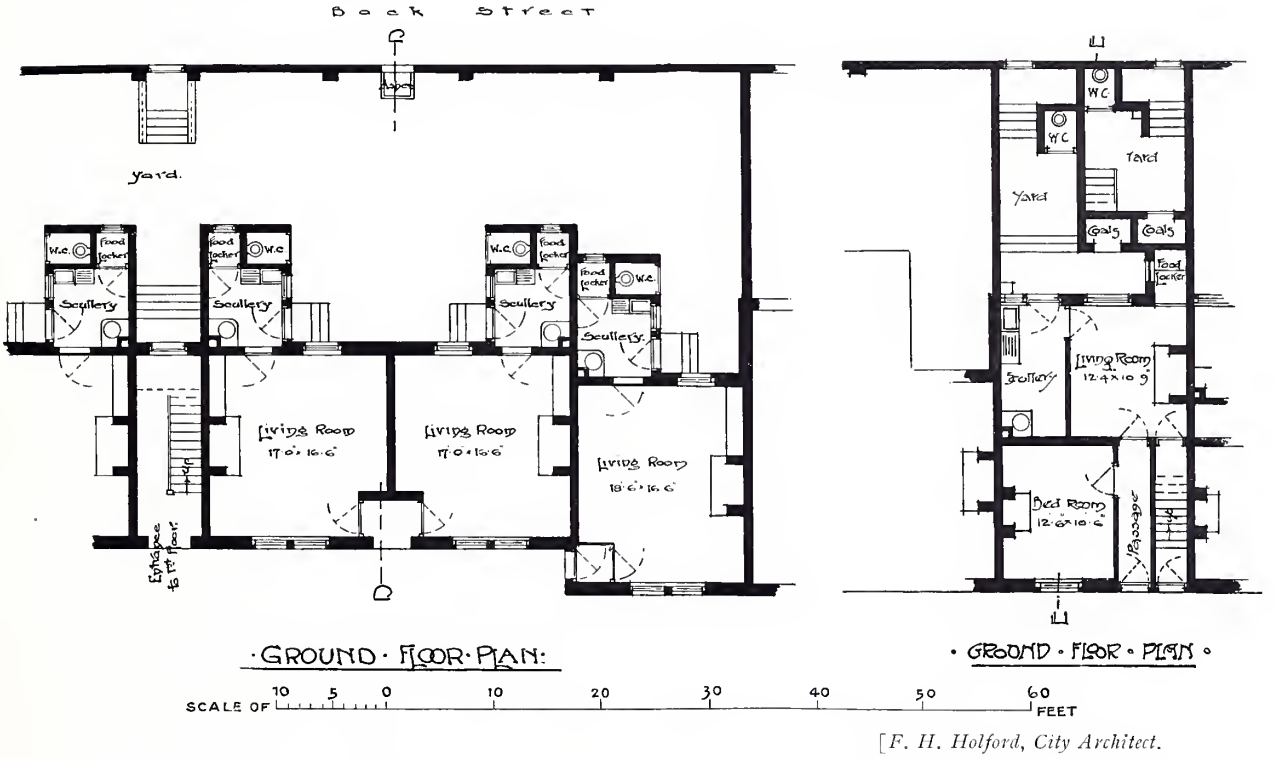



[Henry Price, A.R.I.B.A., City Architect.

Cost of building, £239. Rentals, 6s. 4d. a week inclusive.

# CITY OF NEWCASTLE-UPON-TYNE.

THE City Council have embarked upon a tenement scheme of dwellings intended to meet the requirements of the artisan and labouring classes. On a site situate in Walker Road provision is made for 120 homes, in one and two-room tenements. The one-room tenements




[*F. H. Holford, City Architect.*

City of Newcastle: two types of Dwellings.

make provision for a class of the community often lost sight of in housing projects. The living-room is really spacious, being 17 ft. by 16 ft. 6 in. A separate scullery is attached to each living-room, fitted with copper, sink, and drainer, in addition to which there is a larder and w.c. The larger tenements contain similar accommodation, and some of the bedrooms measure 17 ft. 3 in. by 12 ft. 9 in. The proposed rentals are as follows:—

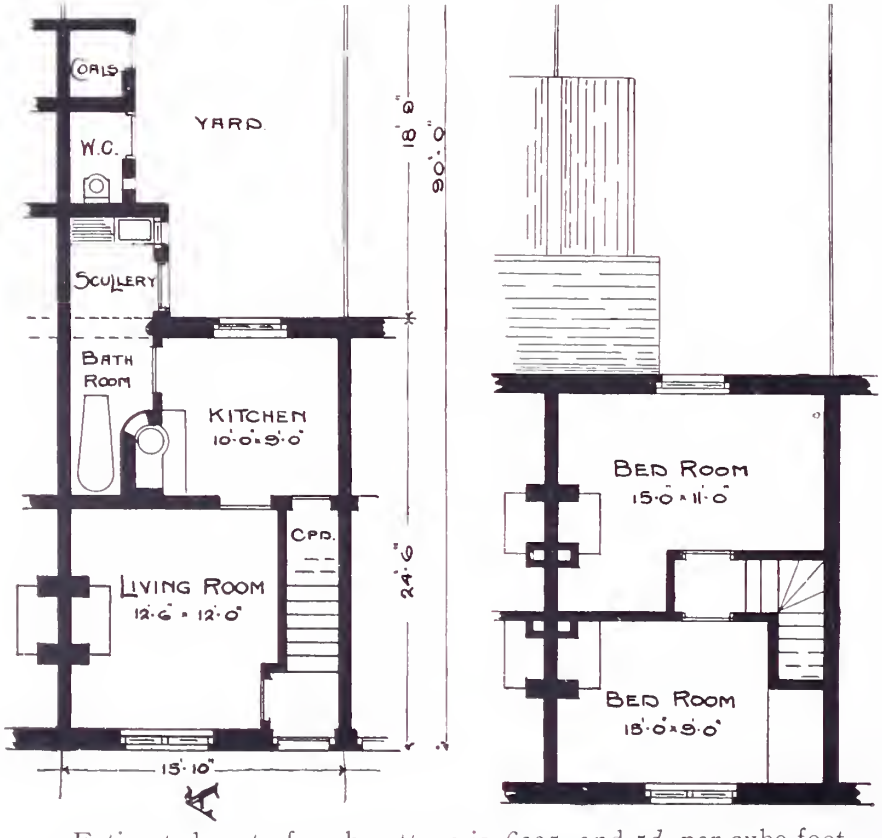
| | | |
|---|---|---|
| One-room tenement ... ... ... | 2*s.* 3*d.* | per week, inclusive |
| Two-room tenement ... ... ... | 4*s.* 3*d.* and 4*s.* 9*d.* | ,, ,, |

and the total cost, inclusive of land and street works, is £23,670, or less than 5*d.* per foot cube, averaging £47 per room, excluding scullery. The scheme will be self-supporting, and the proposed rentals are low, having regard to the accommodation given.

The City of Newcastle, through the foresight of the City Fathers, possesses a magnificent estate containing about 1,150 acres, known as the Walker Estate, which is in close proximity to the City, and should the Council in its wisdom decide to allocate a portion of it for housing purposes, a municipal model village unsurpassed in England could be erected. No finer site for such a purpose can be conceived, and a scheme of such a character could be made self-supporting and a municipal model.

The City architect, Mr. F. H. Holford, who possesses a thorough and practical knowledge of this kind of work, has already prepared plans for 88 houses proposed to be built upon the estate, and, if carried out as proposed, each house will contain a parlour or living-room, 12 ft. 6 in. by 12 ft., kitchen, 10 ft. by 9 ft.; scullery, 10 ft. by 4 ft. 6 in., fitted with Cornes & Haighton's apparatus; two bedrooms on the upper floor, one 15 ft. by 11 ft., and one 11 ft. 6 in. by 9 ft., with a bed recess over the entrance lobby, 6 ft. by 3 ft. 4 in. Each house will have a separate yard 240 sup. ft. in extent,

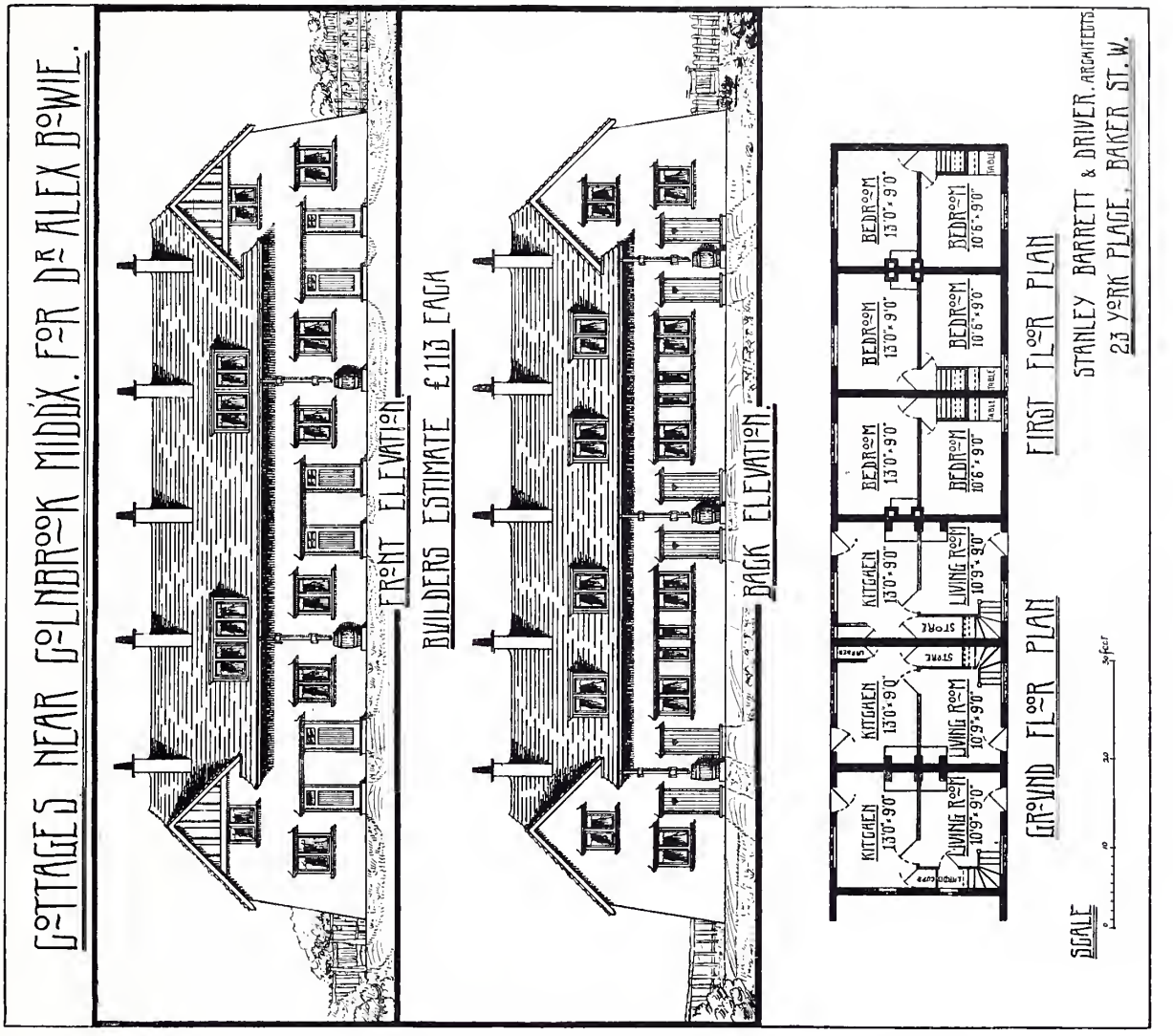
with w.c. and coal-house, and at the end of the yard a piece of land will be provided containing an area of 80 sq. yds. to be used as garden ground. The total area of each site, including house, yard and garden, will be $153\frac{7}{9}$ sq. yds. The site would be charged a ground rent at the rate of 4*d*. per yd. for house and yard, and 1*d*. per yd. for garden, or £1 11*s*. 3*d*. per annum for each site. The estimated cost of each house at 5*d*. per cube ft. is £235, and the street works at £25 per house, which with 5 per cent. additional for contingencies, makes the total cost per house £273. The rental would be 6*s*. 9*d*. per week clear to the tenant. the Corporation paying all rates, taxes, etc., and doing all repairs. After allowing for these items, the balance is sufficient to provide for the ground rent, interest and sinking fund on capital cost.

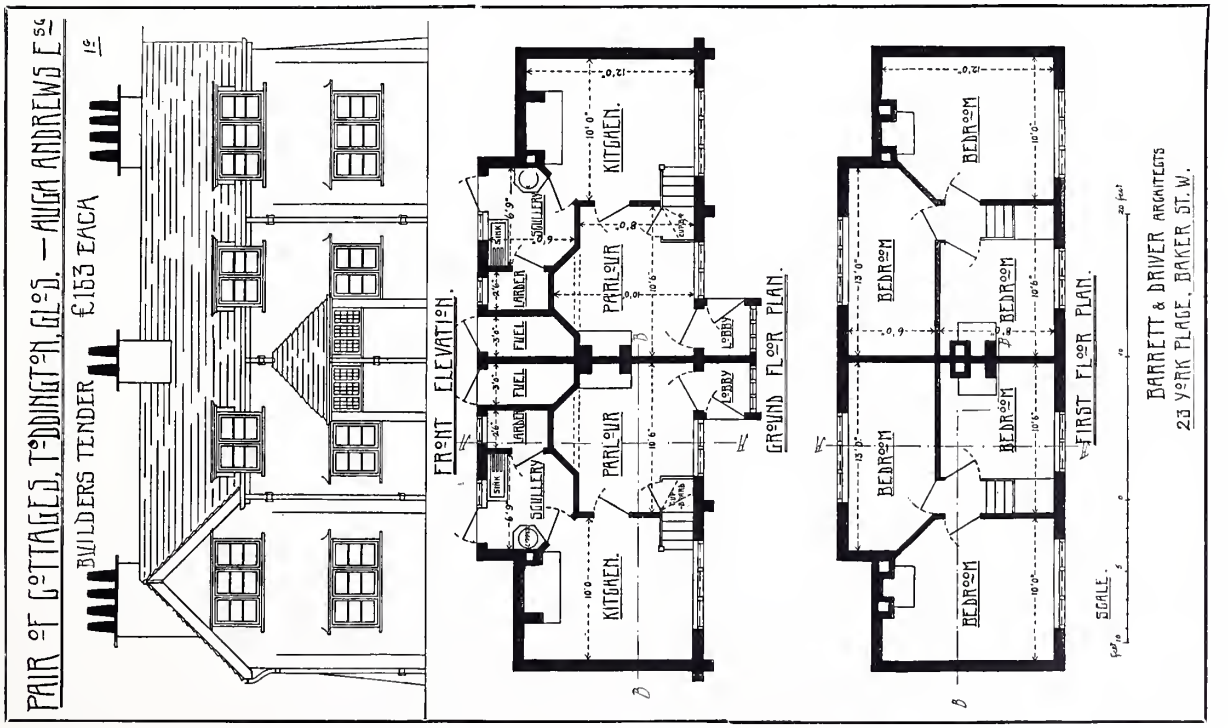



[*F. H. Holford, City Architect.*

Estimated cost of each cottage is £235. and 5*d*. per cube foot. The rentals proposed are 6*s*. 9*d*. a week inclusive.

# DESIGNS FOR WORKMEN'S COTTAGES, BY STANLEY BARRETT & DRIVER, ARCHITECTS.

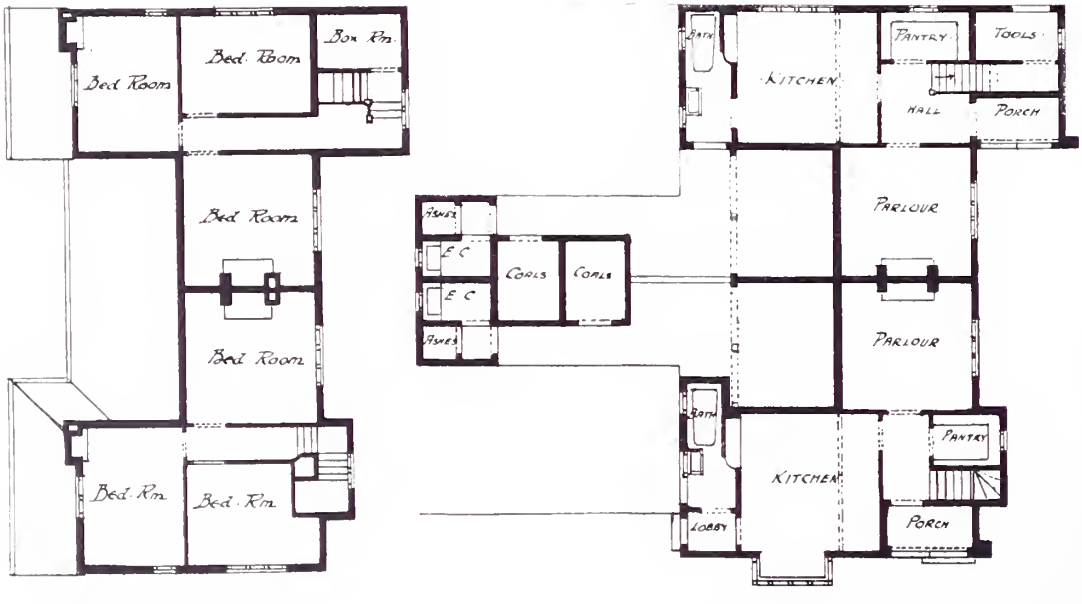


# COTTAGES, NORTHFIELD, WORCESTERSHIRE.

The cottages here illustrated are pleasing and attractive, and are being built for Mr. Edward Cadbury, at West Hills, Northfield, Worcestershire.

The south-west cottage is intended as a lodge, and the accommodation provided in each cottage includes, parlour, 13 ft. by 13 ft.; kitchen, 14 ft. by 13 ft., scullery and bath-room combined, and three good bedrooms.




First Floor Plan.

Ground Floor Plan

Scale. 10 5 0 10 20 Feet

Arthur McKewan ARIBA Archt.
95 Colmore Row Birmingham.

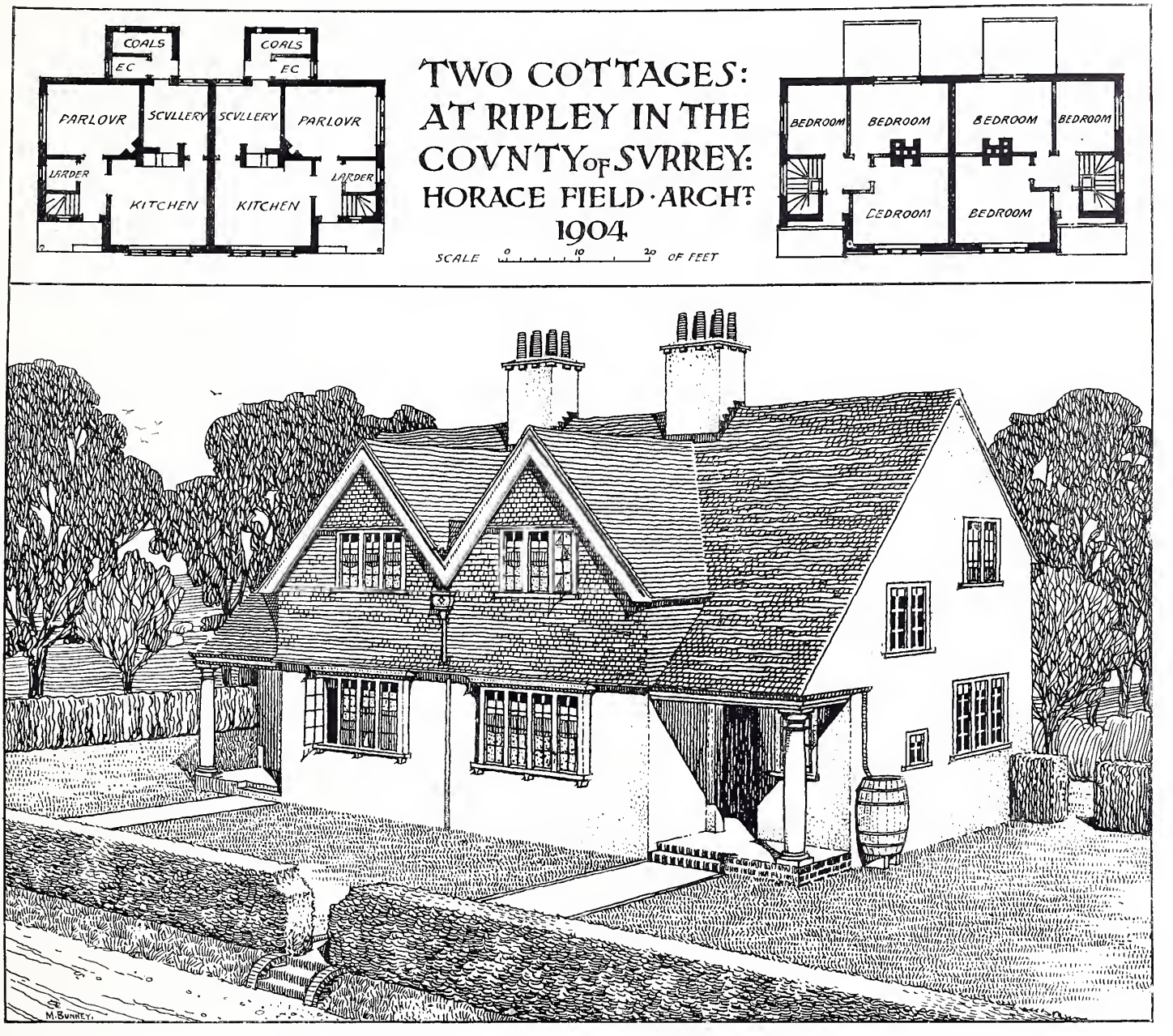
The cost is, approximately, £800.

They are built of brick covered with rough cast in cement, and the roofs are covered with Welsh rustic slates.

The architect is Mr. Arthur McKewan, A.R.I.B.A., 95, Colmore Row, Birmingham.

The cost of this pair of cottages is £800 (approximately).

# COTTAGES AT RIPLEY.




Cost is £585 per pair, $4\frac{3}{4}d.$ per cube foot.

THESE artistic and exceptionally well planned cottages have been designed and are being carried out by Mr. Horace Field, F.R.I.B.A., of 1, Langham Chambers, Langham Place, London, W.

Each cottage contains a kitchen measuring 12 ft. by 15 ft. 6 in.; scullery, 9 ft. by 10 in.; parlour, 13 ft. by 10 ft.

There are three bedrooms in each cottage, measuring 8 ft. 3 in. by 10 ft., 13 ft. $7\frac{1}{2}$ in. by 10 ft., and 12 ft. by 15 ft. 6 in. respectively.

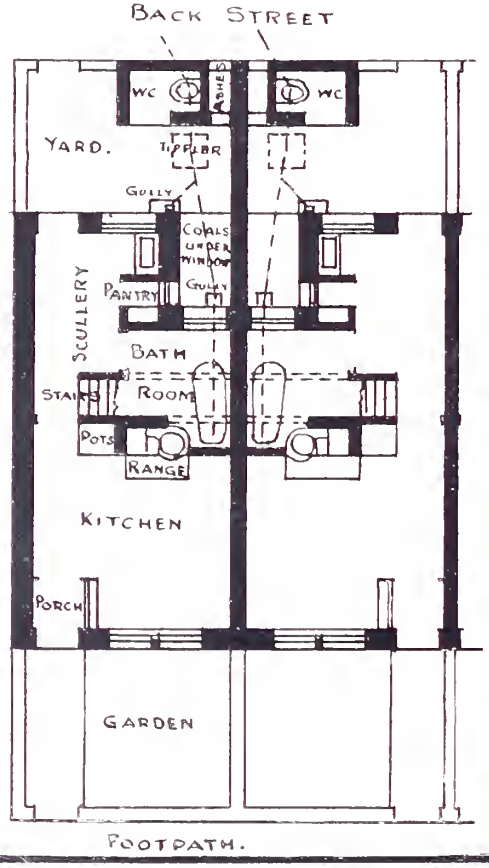
The ground floor is paved with red paving tiles, with the exception of the parlour, which has a wood block floor.

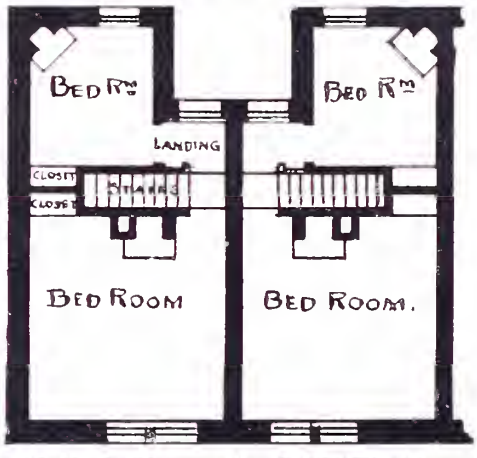
The whole site is covered with 6 in. of cement concrete, and the walls themselves are built in cement up to the damp course, with cement concrete under the footings measuring 2 ft. 6 in. by 12 in. deep. The work is of the best quality, and the kitchens are fitted with Cornes & Haighton's apparatus.

The rough cast is in cement and the tiles are of local manufacture. The contract price, which includes all drains and fitting up the two cottages complete, is £585, or $4\frac{3}{4}d.$ per cube foot.

# MODEL DWELLINGS AT NELSON.

An experiment in cheap model artisans' cottages is being carried out at Nelson, in Lancashire. The exceptionally high cost of street-making admits of little deviation in the general appearance from the type of cottage prevailing in the district. The architect, Mr. H. Whitaker, has, however, struck out a distinctly new line in the planning of the cottages. On the ground floor is a spacious kitchen, scullery, bath-room, and pantry, with two bedrooms over. The rentals are 4*s.* 6*d.* each, exclusive of rates and taxes. The cost of building is £150 each; street-making is £20 per cottage; ground rent, 26*s.*, which gives a return of over 5 per cent. on the outlay. The local rates are 6*s.* 8*d.* in the £ on £8 assessment. All the facings are stone, and the blocks are dressed and delivered on the site at 3*s.* 1*d.* per yd. Building bricks are 22*s.* 6*d.* per 1,000 delivered. Slates are 3*s.* 3*d.* per yd. fixed, and the price of labour is as follows: Bricklayer and labourer, 1*s.* 3½*d.*; joiner, 9*d.*; plumber, 8½*d.*; mason, 9*d.*; plasterer, 8½*d.*




MODEL ARTISANS COTTAGES, FULHAM ST, NELSON. H. WHITAKER, ARCHITECT, NELSON.

Cost, £150 each, 4*d.* per cube foot. Rental, 4*s.* 6*d.* a week, exclusive of rates and taxes.

# MODEL COTTAGES, SUTTON.

(Illustrated on page 114.)

THE design here illustrated is for a block of four cottages forming part of a scheme of thirty-two in all, which are about to be erected in Cellingwood Road, Sutton, Surrey.

The cottages are to be built of brickwork faced with rough cast, with tiled roofs and hoods to windows, the casements being of iron. They are arranged in blocks of various sizes, some containing three cottages, whilst others will be of four, five, or six cottages.

The frontage line is irregular, and the various blocks are so designed and placed as to group effectively as a whole.

It is proposed to erect a small hall in a central position for the benefit of the cottagers. Each cottage will be fitted with Cornes & Haighton's patent combined range, copper, and bath, which will add only a little to the cost per cottage. The group of cottages illustrated will face a large, well-laid-out recreation ground, and when built will have a pleasing and attractive appearance. Much care has been shown in the planning, and it may be anticipated that, as there is nothing of the kind in the neighbourhood, the cottages will be greatly appreciated and eagerly sought after. The scheme may certainly be looked upon as a small model village.

It is to be hoped that the generous example of the owner of this property, Mr. Councillor Wall, of Blythewood, Sutton, Surrey, will be followed by others, bringing about a material improvement in the housing of the working classes.

The estimated price per block of four cottages is £980, or 6*d.* per foot cube. The proposed rental of the cottages is 7*s.* 6*d.* per week, which will be equivalent to a return of $6\frac{3}{4}$ per cent. on the capital outlay. The architects are Messrs. Frederick Wheeler & Son, of 6, Staple Inn, London, W.C.

# MODEL DWELLINGS IN THE COUNTY BOROUGH OF HANLEY.

(Illustrated on page 115.)

A SCHEME of model dwellings of considerable importance, which will provide accommodation for 160 families, is being carried out in Hanley (Staffs.); already over 40 houses are tenanted.

Mr. W. Campbell, the architect, has worked mainly on the lines of the Leek Model Dwellings. It will be noticed, however, that a less costly elevation has been introduced.

The accommodation provided is as follows:—Lobby, 3 ft. wide, laid with encaustic tiles, parlour, spacious kitchen, with semi-ingle, bath-room (so arranged that bathing can be indulged in quite privately), scullery, and three bedrooms: the middle bedroom is arranged in the roof partly between the other two, and is lighted by a skylight.

The houses are much appreciated by the occupiers.

The Mayor, Members of the Town Council and Borough Officials, were invited to view the property, and after an inspection made by them in October, 1902, it was thrown open to the public, and visited by a large number of people.

The *Staffordshire Sentinel*, describing these houses, says: "They are compact, well built, and architecturally attractive, indeed, there is nothing like them in the whole district for their grace of line and agreeable general contour. . . . They are finely planned, splendidly finished, and models of comfort and convenience."

It may be interesting to state that the tenants are given the option of purchasing these houses at £220 each, which includes the freehold site. The price per cube foot is $3\frac{3}{4}d.$

FINANCIAL PARTICULARS OF THE FIRST FORTY HOUSES.

*Capital Expenditure*, £8,800.

| *Annual Expenditure :—* | £ | s. | d. |
|---|---|---|---|
| £8,800 at 5 per cent. ... ... ... ... ... ... ... | 440 | 0 | 0 |
| Rates, Taxes, Water and Repairs ... ... ... ... ... | 218 | 13 | 4 |
| | £658 | 13 | 4 |
| *Annual Income :—* | | | |
| 40 houses at 6s. 4d. per week inclusive rental ... ... | £658 | 13s. | 4d. |

*Prices of Labour :—*

Bricklayer, 8¾d.; labourer, 6d.; joiner, 8½d.; mason, 8¾d.; plasterer, 9d.; plumber, 8d.; navvy, 6d.; painter, 7½d.

| | s. | d. | |
|---|---|---|---|
| Building bricks, delivered on the site ... ... ... | 22 | 6 | per thousand. |
| Facing ,, ,, ,, ,, ... ... ... | 45 | 0 | ,, ,, |
| Roofing tiles ,, ,, ,, ... ... ... | 35 | 0 | ,, ,, |

# THE SMALL HOLDINGS ASSOCIATION.

(Illustrated on page 116.)

THE Small Holdings Association have built a cottage on their Newdigate Estate, Surrey, and the annexed plan shows the cottage described by Professor Long in an article which appeared in the *Daily Mail* of November 5th, 1904; it is intended to serve as a model for this estate.

The house is built in conformity with the local by-laws, which are framed on the model by-laws; the planning is excellent, and the following accommodation is provided :—

| | ft. | in. | | ft. | in. | ft. | in. | | ft. | in. | ft. | in. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Living-room ... ... | 16 | 7½ | by | 11 | 6 | | | | | | | |
| Scullery ... ... | 11 | 6 | by | 6 | 0 | | | | | | | |
| Bedrooms ... ... | 11 | 6 | by | 10 | 4½ | 11 | 6 | by 10 | 4½ | | 8 | 9 by 8 10½ |

The brick plinth is built with a cavity; the wall above is 9 in., covered with rough cast, and the roof is covered with hand-made tiles.

The cost of the cottage, including drainage and cesspool, and Cornes & Haighton's combined range, copper, and bath, is £187 10s., and 5⅔d. per cube foot. Messrs. Smith & Brewer, of 2, Gray's Inn Square, London, are the architects.

# COUNTY BOROUGH OF ROTHERHAM.

(Illustrated on page 117.)

THE artisan dwellings now in course of erection by the Rotherham Corporation are situate in Lord Street, a pleasant part of the town, near the Clifton Park. It will be seen from the annexed illustration and plans that they are dwellings of quite a superior character. The houses are set back 10 ft. from the footpath and enclosed by a dwarf wall with ornamental iron railings. A local brick is being used for the facings, and a square projecting window to the sitting-room with roof continuing over the doorways adds materially to the elevation; the roofs will be covered with blue slates. The accommodation provided is very excellent. Besides a sitting-room 14 ft. 3 in. by 12 ft., there is a spacious kitchen 14 ft. by 9 ft. 6 in. The scullery bath-room is arranged on the plan of the Leek Model Dwellings, with the addition of a pantry approached from the scullery. Each house will be fitted with Cornes and Haighton's combined range, copper, and bath. On the first floor are two bedrooms measuring 14 ft. 3 in. by 12 ft. and 14 ft. 3 in. by 10 ft. 9 in. respectively, and a room in the attic 11 ft. 3 in. by 10 ft. makes a capital third bedroom. The yards are 31 ft. deep by the width of the house, and each yard is divided by a boundary wall about 5 ft. high. Each house occupies an

area of 165 square yards of land, which has been secured at the exceptionally low price of 1*s.* 3*d.* per yard. The contract price is £236 10*s.* per cottage, which is 4*d.* per cubic foot. Sixty years has been granted by the Local Government Board in which to repay the capital sum, and the money necessary for the undertaking has been borrowed at 3¼ per cent. This will enable the Corporation to make the scheme entirely self-supporting at the inclusive rental of 7*s.* 6*d.* per week.

Having regard to the exceptional accommodation provided by this class of house and the seeming low price at which the work is being carried out, the houses will be eagerly sought after when completed, and the members of the Housing Committee and the Council will find that in this, their first undertaking, they have acted wisely in making such excellent provision for the working classes.

Mr. J. Platts, architect, of Rotherham, has prepared the plans and is responsible for the carrying out of the entire scheme.

# COTTAGES AT HEATON.

(Illustrated on page 118.)

## SEMI-DETACHED VILLAS, COQUET TERRACE, HEATON, NEWCASTLE-ON-TYNE, BUILT BY MR. W. THOMPSON.

THESE houses are faced with Accrington first quality red pressed facing bricks, which cost 89*s.* per 1,000 delivered on the site.

The back and sides are faced with Wallsend Atlas bricks, which cost 45*s.* per 1,000 delivered on site, and the upper parts of walls are rough casted. The common bricks for inside work cost 27*s.* per 1,000 delivered on site.

The cost of the slating is 3*s.* 3*d.* per yard super.

The bricklayers', masons', joiners', plasterers', plumbers', and painters' wages are 10*d.* per hour, and the labourers' 7*d.* per hour.

The price per cube foot this house works out at is a little under 5*d.*, and the number of cubic feet contained in each house is about 19,693.

The actual cost of each house, including flagging, boundary walls, etc., is £420; this is without the ground, main sewer, and street making.

The price of the land is 10*s.* per yard, and each site contains about 245 square yards.

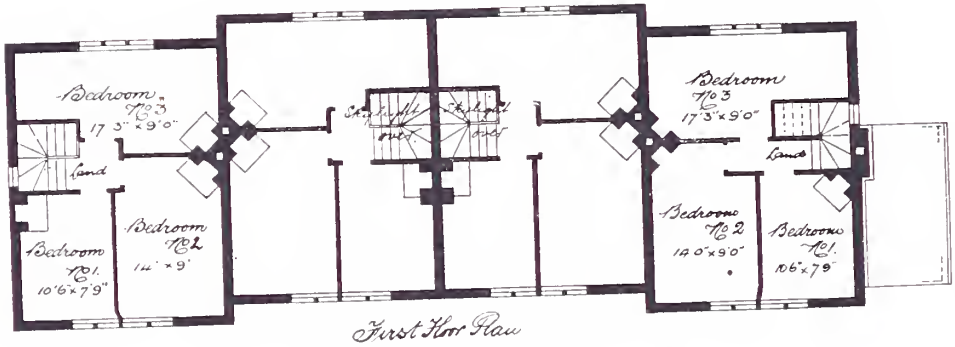
Total cost as follows:

| | £ | *s.* | *d.* |
|---|---|---|---|
| House, including flagging, boundary walls, etc. | 420 | 0 | 0 |
| Land | 122 | 10 | 0 |
| Main sewer | 5 | 0 | 0 |
| Street making | 15 | 0 | 0 |
| Total cost | £562 | 10 | 0 |

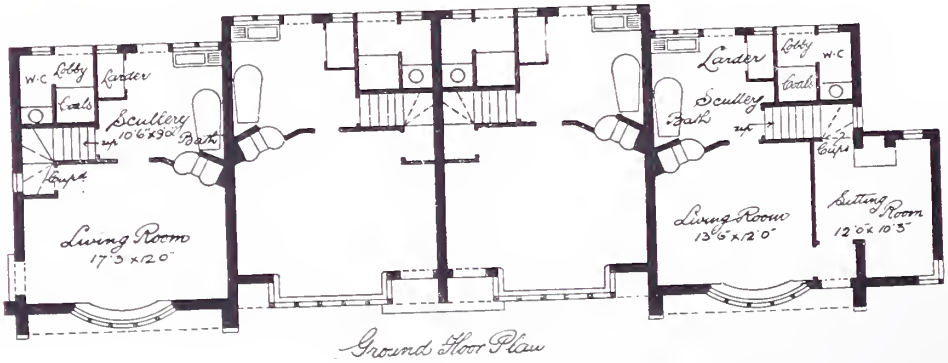
The architects are Messrs. White & Stephenson, of Newcastle-on-Tyne.

# ~MODEL~COTTAGES~SUTTON~SURREY~

Frederick Wheeler + Son



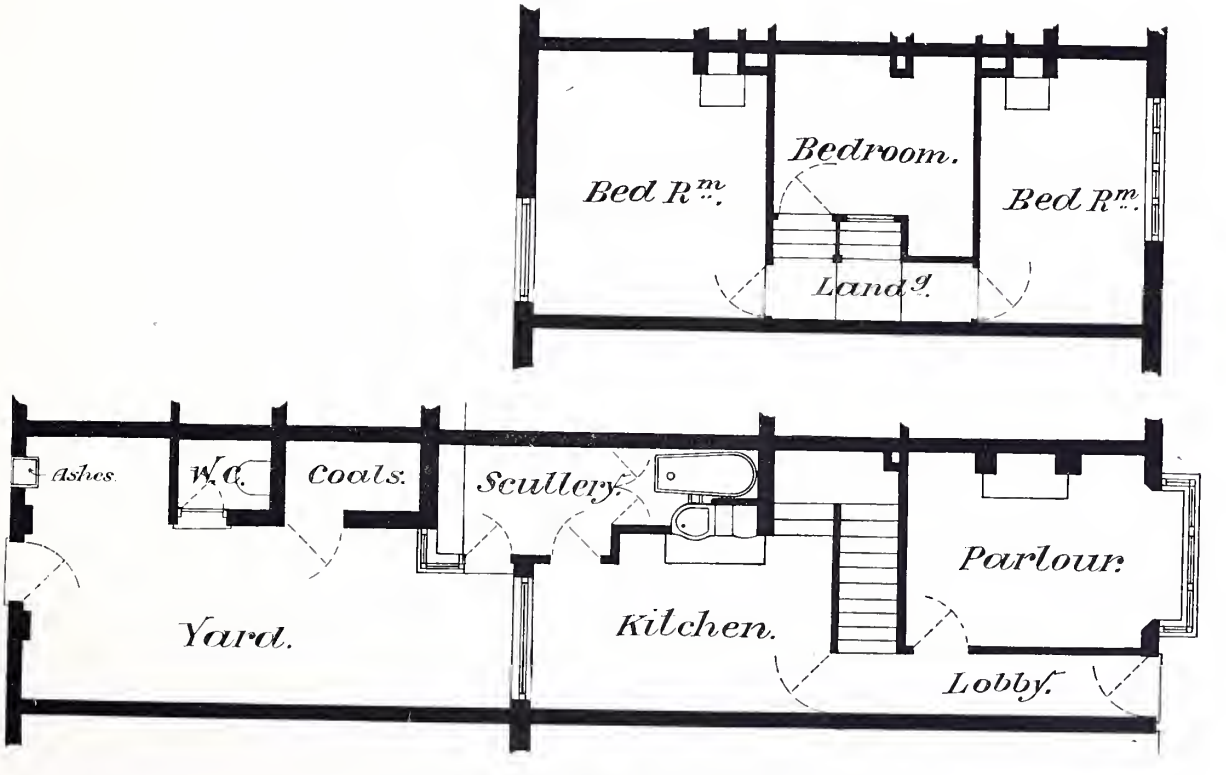

First Floor Plan




Ground Floor Plan

To cost £980 per block of four cottages, 6*d*. per foot cube. Proposed rentals, 7*s*. 6*d*. per week per cottage.

# Model Artisans' Dwellings.
## County Borough of Hanley.

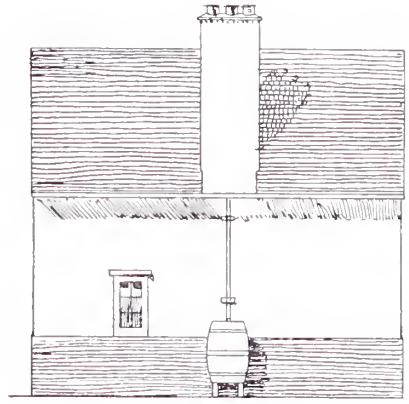



Cost of building, £185. Cost per foot cube, $3\frac{3}{4}d.$ Rent per cottage, 6s. 4*d*. per week inclusive.

# COTTAGE AT NEWDIGATE SURREY FOR THE SMALL HOLDINGS ASSOCIATION.

*As illustrated in the "Daily Mail," November 5th, 1904, with descriptive article by Professor Long.*

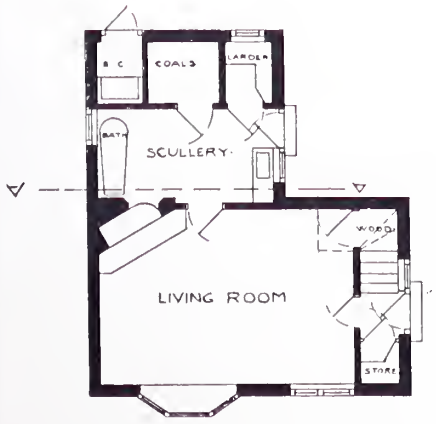
SOUTH ELEVATION.



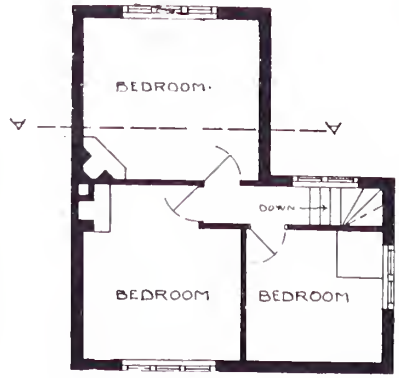
WEST ELEVATION.

EAST ELEVATION.

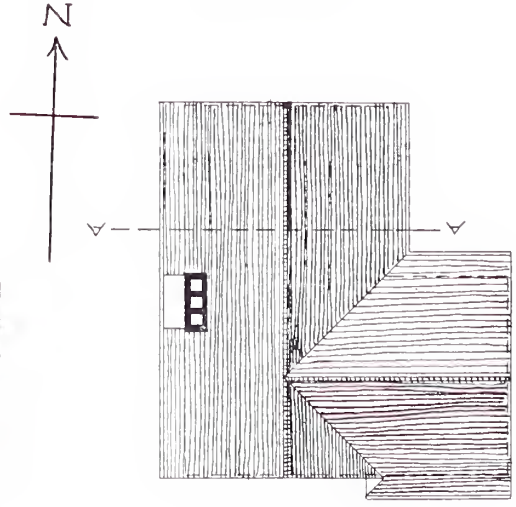
NORTH ELEVATION.



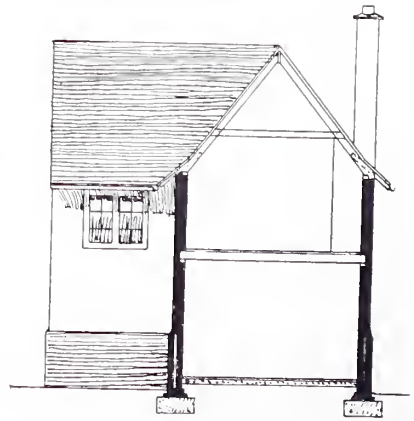

GROUND FLOOR PLAN.




1st FLOOR PLAN.

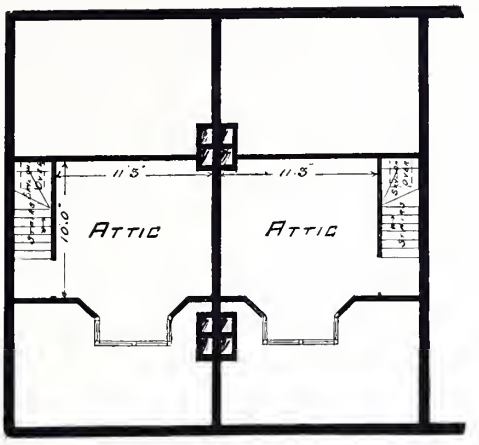



ROOF PLAN.



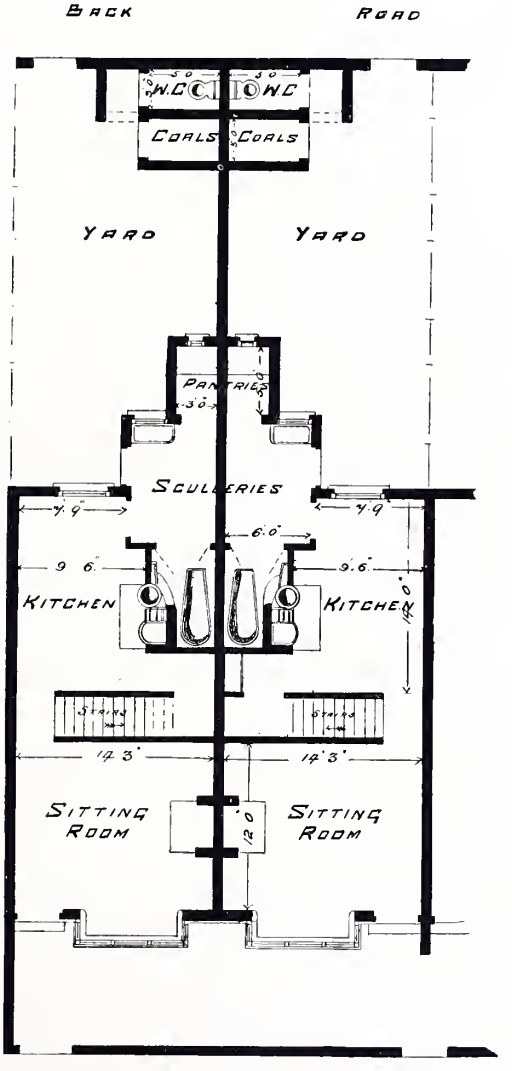
SECTION A.A.

Cost per cottage, without the well, £187 10s. Cost per cube foot, $5\frac{2}{3}d.$

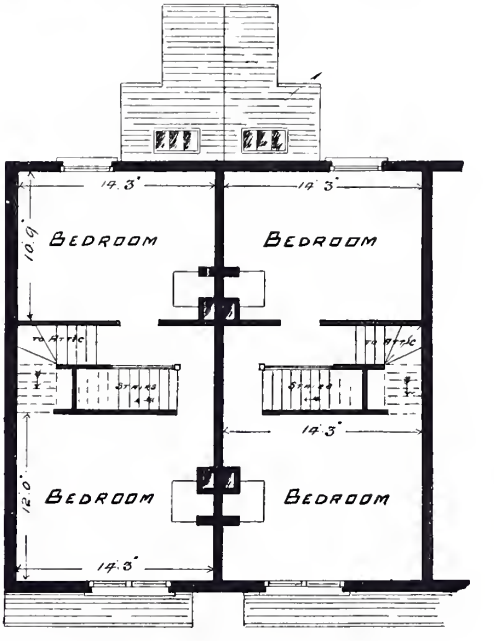



ATTIC PLAN

FRONT ELEVATION




GROUND PLAN




CHAMBER PLAN

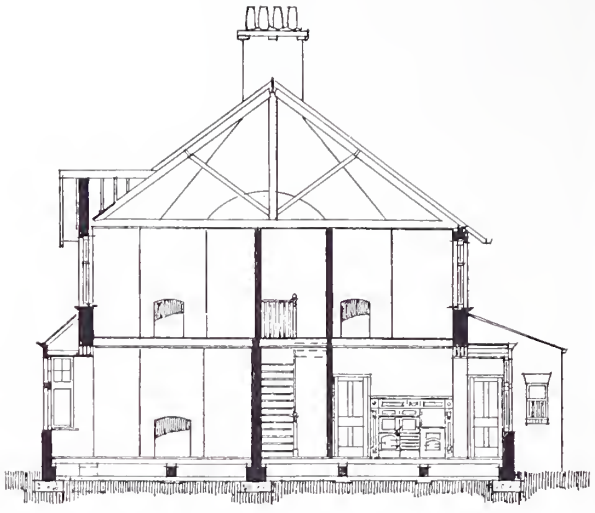
# BOROUGH of ROTHERHAM ARTIZANS DWELLINGS,

J. PLATTS
ARCHITECT
ROTHERHAM
MARCH 1905

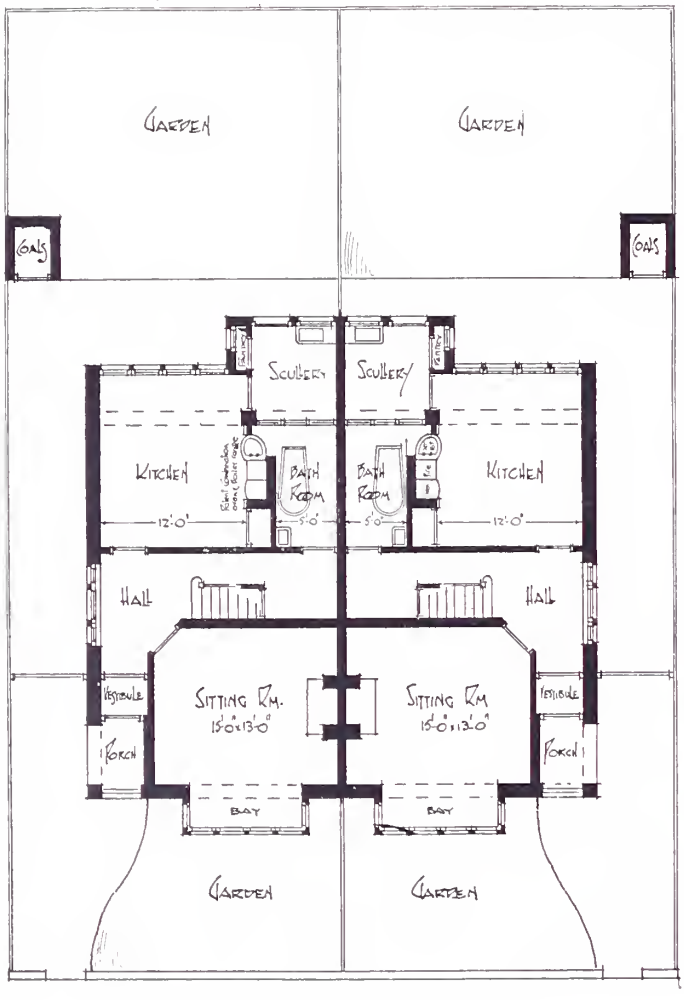
SCALE OF 10 5 0 10 20 30 40 50 FEET

# SEMI-DETACHED VILLAS AT HEATON.

FRONT ELEVATION



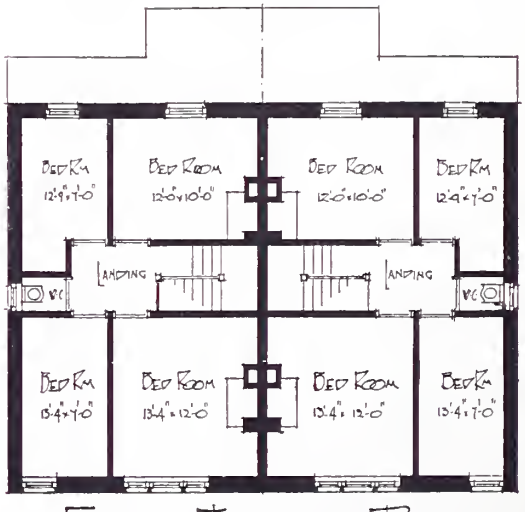
SECTION




GROUND PLAN

SCALE OF 0 1 2 3 4 5 6 7 8 9 10 11 12 FEET

SKETCH




FIRST FLOOR PLAN

[ *White & Stephenson, Architects.*

Cost per pair, £840 ; 5*d*. per foot cube.

[*J. T. Brealey, Architect.*

Cost, $3\frac{3}{4}d.$ per foot cube. Rentals, 5*s.* 6*d.* a week inclusive.

# LEEK MODEL DWELLINGS.

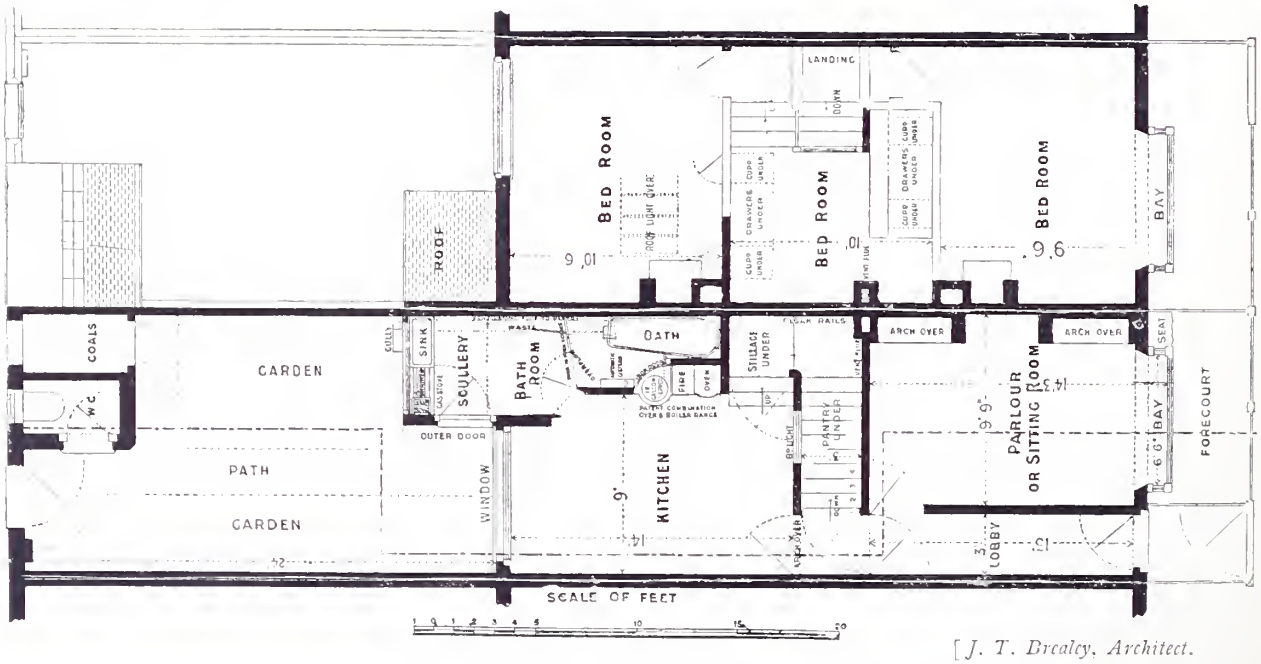
The town of Leek, which has a flourishing silk industry, was found, a few years ago, to be suffering from a limited supply of workmen's dwellings. The writer set himself to meet the demand, and having purchased a site for the erection of 300 dwellings, determined to demonstrate what could be done for an inclusive rental of 5*s.* 6*d.* per week. After visiting many of the examples to be found in England, the plan of house as illustrated was carried out in collaboration with the architect, Mr. J. T. Brealey.

The cost of the site was nearly a thousand pounds per acre, and prohibited the possibility of a limited number of houses being built to the acre. The houses are built to a frontage of 14 ft., *i.e.* from centre to centre, and the accommodation is as follows:—

Lobby, 3 ft. wide, same length as parlour, which measures, including bay, 14 ft. 3 in. by 9 ft. 9 in. The kitchen is 14 ft. by 9 ft. The kitchen fire-place is so placed as to admit of the bath being fixed at the rear, and the space set apart for this purpose forms part of the scullery, a small portion of this room only forming an outer wing, and it is so arranged as to cause no diminution of light to the kitchen. There are three bedrooms, the middle one of which is formed partly in the roof and is dovetailed in between the front and back bedrooms. This arrangement is considered an improvement on the attic bedroom and is less costly. The higher level of the floor of this room admits of cupboards and drawers being conveniently arranged under opening into the other two rooms, which are thus greatly improved. A dormer window instead of a skylight would meet the requirements of the Local Government Board.

A local red brick is used, but the facing bricks are plastic red Lancashire bricks. The roof is high pitched and is covered with red tiles. From each story projects a bay window 6 ft. 6 in. in width, constructed of timber, tile, and plaster work, and fitted with square leaded panes in the top lights. The forecourts are enclosed with varnished oak palings.

## MODEL DWELLINGS, LEEK.




[*J. T. Brealey, Architect.*

Cost, $3\frac{3}{4}d.$ per foot cube. Rentals, 5*s.* 9*d.* a week inclusive.

The bathing arrangements are distinctly original, for no solution of this problem for a workman's cottage had previously been found. The ordinary circulating high pressure system, besides being too costly, is too intricate for the ordinary artisan class.

By the death of a member of his family through the bursting of a high pressure boiler the writer was driven to devise some method of providing an adequate supply of hot water that would be free from risk, labour-saving, and economical. Moreover, no cottage is complete

without a bath, and no bath is complete without hot water. Consequently, Cornes & Haighton's apparatus was invented with the inception of these dwellings, and represents economy of space, economy of coal, economy of labour, and, there being nothing sealed, there is no risk of explosion. By this arrangement, the kitchen fire keeps the kitchen, bath-room, and scullery at an even temperature. (This apparatus has since been adopted by the following Corporations: Battersea, Rotherham, Camberwell, Hornsey and Manchester, and for private housing schemes at Birmingham, Liverpool, Syston, Lutterworth, Ripley, Leicester, Nelson, Hanley, Durham, Belper, Newcastle-on-Tyne, Hexham-on-Tyne, Harecastle, Eastleigh, Heaton, Great Yarmouth Artisans, Labourers and General Dwellings Company, Ltd., London, Bournville Village, Newdigate Small Holdings Association, The Garden City, and many others, over 1,000 having been fitted within the last two years.)

This scheme is fully described in detail, with illustrations, particulars of financial results, quantity of materials and relative cost of same, by Councillor Thompson in his carefully and ably prepared Housing Handbook, which contains also much other information collected at great labour and cost. It is published by the National Housing Reform Council, 432, West Strand, London, W.C., at half-a-crown, and, already, a second edition has been issued. We quote the following: "The builder of the Richmond cottages, of which we have made previous mention, estimates that the cost of constructing the Leek Model Dwellings in London would approximate to £262—that is, about £20 more than the Richmond Class B. cottages, which have only two bedrooms."

| Financial Particulars. | £ | s. | d. |
|---|---|---|---|
| Cost of proportion of land for 48 houses ... ... ... | 1,237 | 0 | 0 |
| Roads and sewers ... ... ... ... ... ... | 524 | 0 | 0 |
| Sundries ... ... ... ... ... ... ... ... | 100 | 0 | 0 |
| Buildings ... ... ... ... ... ... ... | 10,639 | 0 | 0 |
| | £12,500 | 0 | 0 |
| **Income.** | | | |
| 24 Houses at 5s. 9d. ... ... ... ... ... ... | 343 | 17 | 0 |
| 14 Houses at 5s. 6d. ... ... ... ... ... ... | 200 | 4 | 0 |
| 10 Houses and 2 Shops, 6s. to 10s. ... ... ... | 213 | 4 | 0 |
| | £757 | 5 | 0 |

This shows a gross return of 6 per cent. on the outlay, and, after allowing for working expenses, there is a net return of $4\frac{3}{4}$ per cent.

The local rates are 4s. $9\frac{1}{2}d.$ in the pound, and the cottages are assessed at £8 5s. each.

The cubical contents are 12,834 ft.; the price per foot cube $3\frac{3}{4}d.$

The *Staffordshire Sentinel*, of October 19th, 1901, says:—

"An ideal reduced to actual bricks and mortar."

The *Leek Post*, of August 18th, 1901, says:—

"We were prepared to see something out of the ordinary in the way of a workman's house, but we were by no means ready for the marvellous combination of high-class quality of materials and workmanship, with such beauty of design and such striking conveniences as we saw displayed before us."

Dr. Walsh, Medical Officer of Health, London, reports:—

"There need be no apology for describing with some detail certain five-roomed cottages, which are handsome, well built, airy, provided with hot and cold water bath, scullery, stillage, and five rooms, all at the extremely moderate rental of five shillings and sixpence per week. That description suggests the ideal working man's dwelling we have been anticipating for so many years. The present writer, however, can testify from his own observation that the above ideal has been reduced to actual bricks and mortar."

The *Public Health Engineer*, of January 8th, 1901, says:—

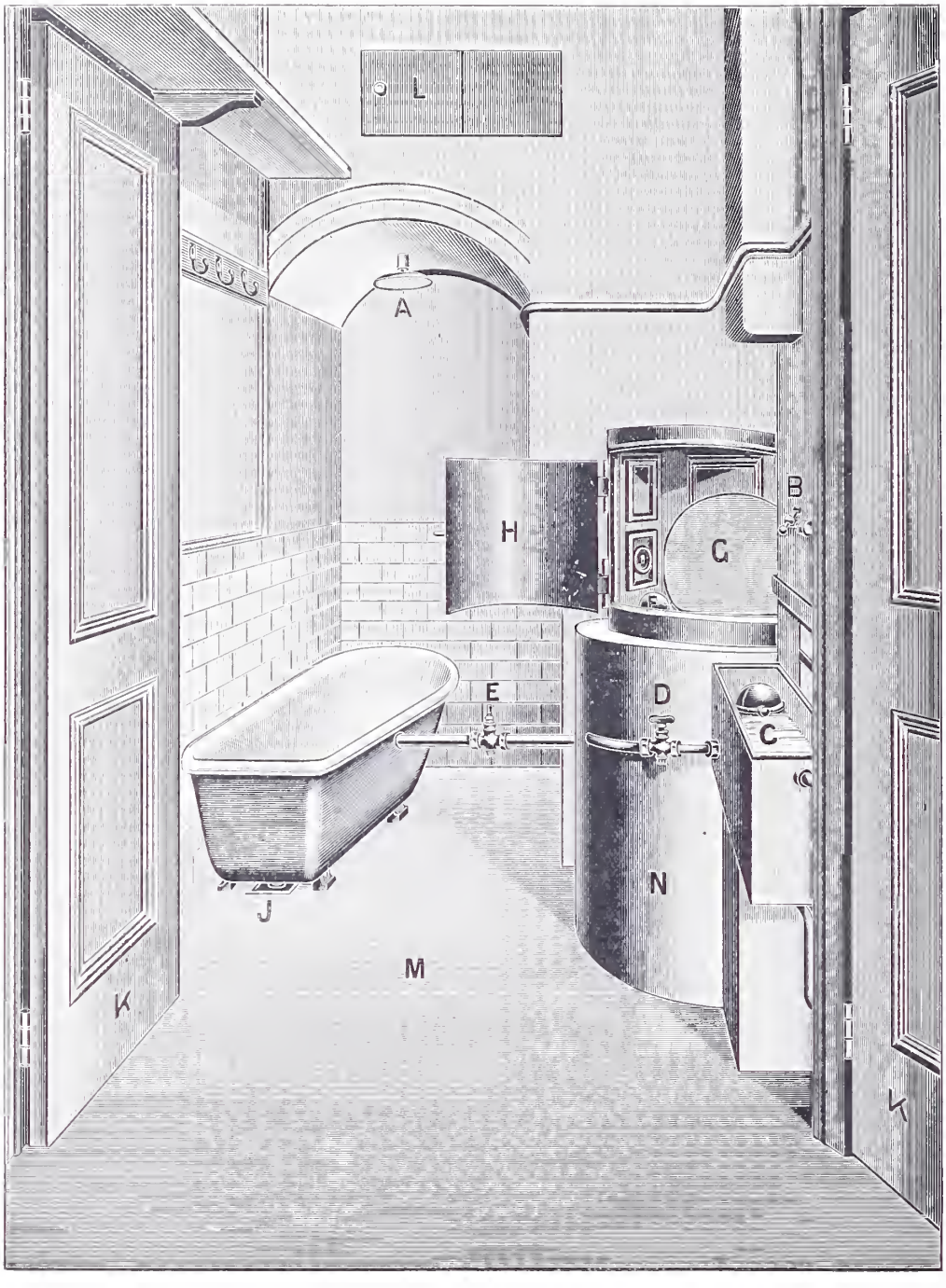
"The most prominent as well as the most interesting feature of the kitchen is the heating and cooking range. In the centre is the grate, with an oven on one side and on the other a good-sized boiler."

The *Leek Times*, of May 11th, 1901, says:—

"Upon going into the houses, we were struck with some great and manifest improvements" . . . . .

The *Staffordshire Advertiser* says:—

"A great object-lesson is presented to provincial emulators of Peabody and Lord Rowton, who desire to remove from our towns the great social evil of overcrowded and insanitary dwellings without in any sense 'pauperising' the people whose well-being they have at heart."




Description of Bathroom.

The *Leigh Chronicle*, in presenting a Supplement on August 22nd, 1902, says:—

"It is to suggest to public bodies a good type of dwelling and to indicate a standard of decency and comfort to which we think all workers should aspire, that we venture to publish as a supplement an illustrated description of a 'Model Artisan's Cottage.'

"The houses we shall describe are the property of Mr. Councillor Cornes, and are situate in the pretty and ancient town of Leek, in Staffordshire."

# THE CHEAP COTTAGES EXHIBITION.

## LETCHWORTH (GARDEN CITY), HERTFORDSHIRE.

*34 Miles from London (G. N. Ry. Main Line).*

JULY 25TH TO SEPTEMBER 30TH, 1905.

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# MODERN HOUSING—CHEAP COTTAGES EXHIBITION SECTION.

## INTRODUCTION.

The suggestion made some time ago by the *County Gentleman* that it would be of great interest and usefulness if an Exhibition of "Cheap Cottages" could be held, attracted considerable attention.

The Exhibition now about to be opened by the Duke of Devonshire at the Garden City, Letchworth, is the result of that suggestion, and it has taken a far more valuable and practical form than at first appeared possible.

It was thought that the Exhibition should be held in the immediate neighbourhood of London, but the difficulty, among others, of obtaining a suitable site, the many concessions and permissions to be obtained, and the disadvantage of having to destroy many of the cottages erected for the purpose of the exhibition, which would not be erected under the regulations of the district for permanent buildings, made it necessary to consider an alternative plan.

The Garden City Company generously offered to provide the necessary land and give facilities for holding the Exhibition, and also to give reasonable terms to exhibitors of cottages for leasing the land on which the cottages were erected. The Company further guaranteed to find purchasers or tenants at profitable rates for all the cottages which they could approve for permanent occupation on their property. A meeting was convened, the Garden City Company's offer was accepted, and a representative committee appointed to carry out the project.

The *County Gentleman*, assisted by the Garden City Company, raised the necessary funds for organising the Exhibition and providing prizes. The subscription list to date amounts to about £1,700. Among the sums subscribed are the following:—

The Ecclesiastical Commissioners, £230.
The Duke of Devonshire, £100.
The Duke of Bedford, £100.
The *County Gentleman*, £100.
The First Garden City, Limited, £100.

The exceptional facilities afforded by the committee and the prizes offered brought ready responses from pioneers of new plans of housing.

Sites for over ninety cottages have been allotted, and already the keenest interest is being evinced in the undertaking. The annexed plans and illustrations of the cottages, which are probably the most remarkable and interesting series ever presented to the public, give an idea of the varied and representative character of the exhibition.

A short description is appended to each plan, and, for the present, the reader is left to exercise his judgment as to the merits of the various designs.

One or two general observations may, however, be made as to the value and probable outcome of the Exhibition. There is in the country a greater lack than there ought to be of the knowledge of new methods and materials available for cottage building. The Exhibition should do much to dispel the ignorance of how to build remunerative cottages (and building at a loss is a luxury of the small minority upon which agricultural districts cannot depend for their housing). A further object is to make the use of this knowledge more generally permissible. No one could condemn wholesale the bye-laws which have done so much to promote sound and sanitary buildings, but there is no doubt that in many districts they prevent the building of cottages suitable to the needs of the local population and restrict the use of materials which are to hand. It is hoped that those who are responsible for these bye-laws will feel that they are here in a sense challenged either to point out valid objections to methods or materials which they now forbid or else to unite in making the bye-laws more reasonable and consistent throughout this country.

The Exhibition is of a national and even international character, and samples of cottages suitable to the various localities in Great Britain have been invited. In most localities there are local materials, and an effort is being made to demonstrate what are the cheapest available materials in different districts.

Subsidiary to the main exhibition of cheap cottages, there will be competitions for models and designs of cottages and a loan exhibition of photographs of cottages from all parts of the country, garden city views, plans of town development from all parts of the world, fittings and furniture suitable for small cottages, exhibits from guilds of handicraft, designs for cottage gardens, garden implements, etc., models and designs of buildings for small holdings, and, lastly, plans of cottages and reports of social, economic, co-operative, educational, and other societies.

A special feature will be an auxiliary exhibition of all appliances intended to cheapen and improve cottage property, and manufacturers of all classes of materials and fittings are entering the various competitions.

The Exhibition, being of such an entirely novel character, is bound to be disappointing in one or two of its results, and it may, therefore, be considered desirable to repeat it in a few years' time when the experience gained on the present occasion will prove invaluable. For instance, some of the architects may have found it impossible to erect their cottage within the £150 allowed in the principal competition; others may find it almost impossible to exactly state the cost of their cottage at the Exhibition or those which they may build on the same lines in their own locality.

Whatever may be the immediate result of the Exhibition in regard to the cheapening of cottage property, it certainly must be of considerable value in bringing out new ideas and in showing certain improvements in construction and design. It is also an entirely new kind of Exhibition, which, as already stated, should be the forerunner of others, and, if the matter is followed up with the interest and enthusiasm with which it has been initiated, there can be no doubt that the Cheap Cottages Exhibition will have a powerful effect on the future of rural housing, not only in Great Britain, but perhaps throughout the world. It is fitting that such a scheme should have the patronage of some of the most distinguished noblemen and statesmen in England, and it is gratifying to know that they have lent their names and influence to an undertaking which is likely to meet with such remarkable success.

The writer would like to express his special thanks for the ready assistance and co-operation which have been given him by the Cheap Cottages Exhibition Committee, the chairman, Mr. J. St. Loe Strachey; the organising secretary, Mr. Wilbraham V. Cooper, and Mr. Thomas Adams, the secretary of The First Garden City, Limited; also the architects and builders of the various exhibition cottages who have furnished the plans and descriptions to the writer.

## CLASSIFICATION OF EXHIBITS.

### COTTAGES.

The primary object of the Exhibition is to secure the erection of the best £150 Cottage, and a first prize of £100 has been definitely offered for this exhibit. Cottages entered for this prize should be detached, and should, as far as possible, be in accordance with the following description :—

| | | | |
|---|---|---|---|
| Class 1.—1. | Number of living rooms | ... | One living room and scullery or kitchen-scullery. |
| 2. | Height of same ... | ... | Not under 7 ft. 6 in. |
| 3. | Number of bedrooms | ... | Three, with two fireplaces. |
| 4. | Height of bedrooms | ... | Not under 7 ft. 6 in. |
| 5. | Cubic space in bedrooms | ... | 2,000 ft. |

Class 2.—A prize will be offered for the best pair of five-roomed Cottages (including scullery or kitchen-scullery) erected at a cost not to exceed £300.

Class 3.—A prize will be offered for the best group of three or four Cottages, no one Cottage to contain more than six rooms, including scullery, and erected at a cost not to exceed £35 per room.

Class 4.—A prize will be offered for the best detached Cottage, or pair of Cottages, each containing not more than six rooms, including scullery, and erected at a cost not to exceed £35 per room.

*Note.—The estimated cost of erection in each case is to be exclusive of Architect's Fee and Builder's Profit.*

In making their final awards for all classes of Cottages, the Committee will take into consideration the relation of cost to appearance, accommodation, comfort, durability, fittings, suitability of material,

and efficient workmanship. Marks will be given for special excellence in these particulars, or taken off where exhibits are considered defective.

It is also desired to, if possible, secure an exhibition of the most suitable buildings for small holdings and allotment gardens.

## DESIGNS.

Class 5.—A prize will be offered for the best design and specification for a detached labourer's Cottage, the estimate cost of which must not exceed £150.

Class 6.—A prize will be offered for designs and specifications for Cottages which would be eligible for Class 2 of the Building Competition.

Class 7.—A prize will be offered for designs and specifications for Cottages which would be eligible for Class 3 of the Building Competition.

Class 8.—A prize will be offered for designs and specifications for Cottages which would be eligible for Class 4 of the Building Competition.

A Special Prize of £10 is offered by H. G. Elwes, Esq., for the best design of a wooden Cottage, to be constructed entirely of English timber. Designs may be for detached or semi-detached Cottages.

Photographs, Sketches, and Paintings of Cottages are invited for Exhibition, and will be hung free of charge.

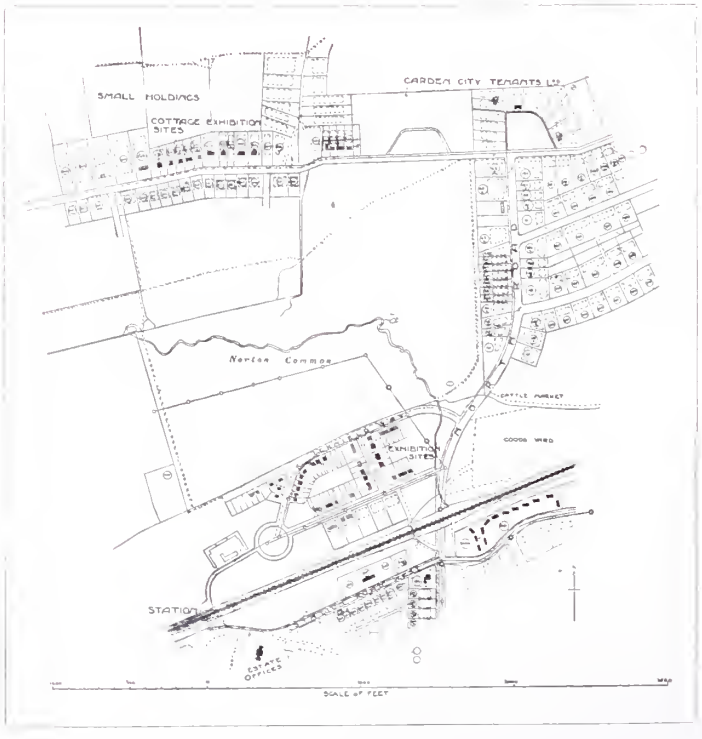
The First Garden City Company will provide space, and probably offer prizes for the best plans or designs showing the best system of laying out new towns, suburbs of existing towns, etc. Photographs, plans, and sketches of city development all over the world are also invited.

## MATERIALS AND FITTINGS.

Prizes will be offered for the best invention or improvement in building materials, and fittings calculated to improve, cheapen, or facilitate, the erection of Cottage property.

Space will be provided for exhibitors of accessories, building materials, etc.

Exhibits of furniture, products of village industries and guilds of handicraft, etc., etc., are invited.




Plan (greatly reduced) of Cottage Exhibition Sites, Garden City.

# PLANS AND DESCRIPTIONS OF EXHIBITION COTTAGES.

## PAIR OF COTTAGES DESIGNED FOR THE LETCHWORTH BUILDING SYNDICATE, BY MR. V. DUNKERLEY, ARCHITECT.

### PLOTS 464—466.—CLASSES 2 & 4.

The pair of cottages erected on plots 464 and 466 are designed to provide two good living rooms having special features to meet both summer and winter comforts and requirements, which will induce the tenant to use both apartments regularly. The illustrations are explanatory of these features, but the fitting called the "Model Cottager," although well known and extensively installed, merits special description. This fitting is a combined range, copper and bath (either stationary or folding). It is fixed in the dividing wall between the two rooms. The front part in the living room has an oven on one side, and a copper, which is accessible from the kitchen-scullery, on the other, the grate being in the centre. The copper for laundry purposes is fed automatically by a low pressure feed-water cistern; there is no fear of explosion. Pipes connect the copper to the bath adjoining; the water in the copper is kept hot by the range fire, and a hot bath can be taken in comfort even in the coldest weather, the room being warmed by the heat radiated from the apparatus. A secondary grate is provided under the copper so that the water can be heated when the range fire is not in use. Thus the fuel which heats and cooks in one room also provides hot water for boiling clothes and bathing purposes in the other. In addition to the range in the living room, the kitchen-scullery is provided with a stove of the self-setting type.

A feature in the cottage on the east side is the sink recess, which forms part of the kitchen-scullery when the doors are open. When the latter are closed there is no unsightly sink, pots or pans, etc., to look upon, these all being shut from view in this well lighted and ventilated sink-recess.

The approach to the w.c. is from a back porch, thus avoiding a publicity which is so often noticeable and undesirable.

Every room in these houses and also the staircases are particularly well lighted.

The floors of the living room and kitchen-scullery are laid with wood block flooring, the hall being laid with 6 in. red quarries.

Externally the lower part of the building is of "White" Asbestic brick, giving an unique and very pleasing appearance to the exterior; the Asbestic in the bricks makes them a non-conductor of heat and sound. The mansard roof is covered with machine-made tiles. All inner partitions on both floors are erected of "Mack" partition slabs.

Above the first floor there is no brickwork. The fireplaces of the two bedrooms are constructed of a special patent flue-fireplace, the flues of which are made of fireclay blocks and are taken through the roof. This method of construction economises space, prevents the too frequent obstruction found in flues, a uniform size of flue being obtainable from fireplace to top of chimney; the cost of mantel registers is saved, and it is particularly durable and less costly than brickwork.

These are the first cottages in which this system of flue-fireplace has been adopted.

All the windows throughout these cottages are fitted with the "Magic" patent window balance, which dispenses with weights, pulleys, etc., thus effecting a saving in woodwork, and the sash can be so adjusted as to obtain a perfect system of ventilation without draught.

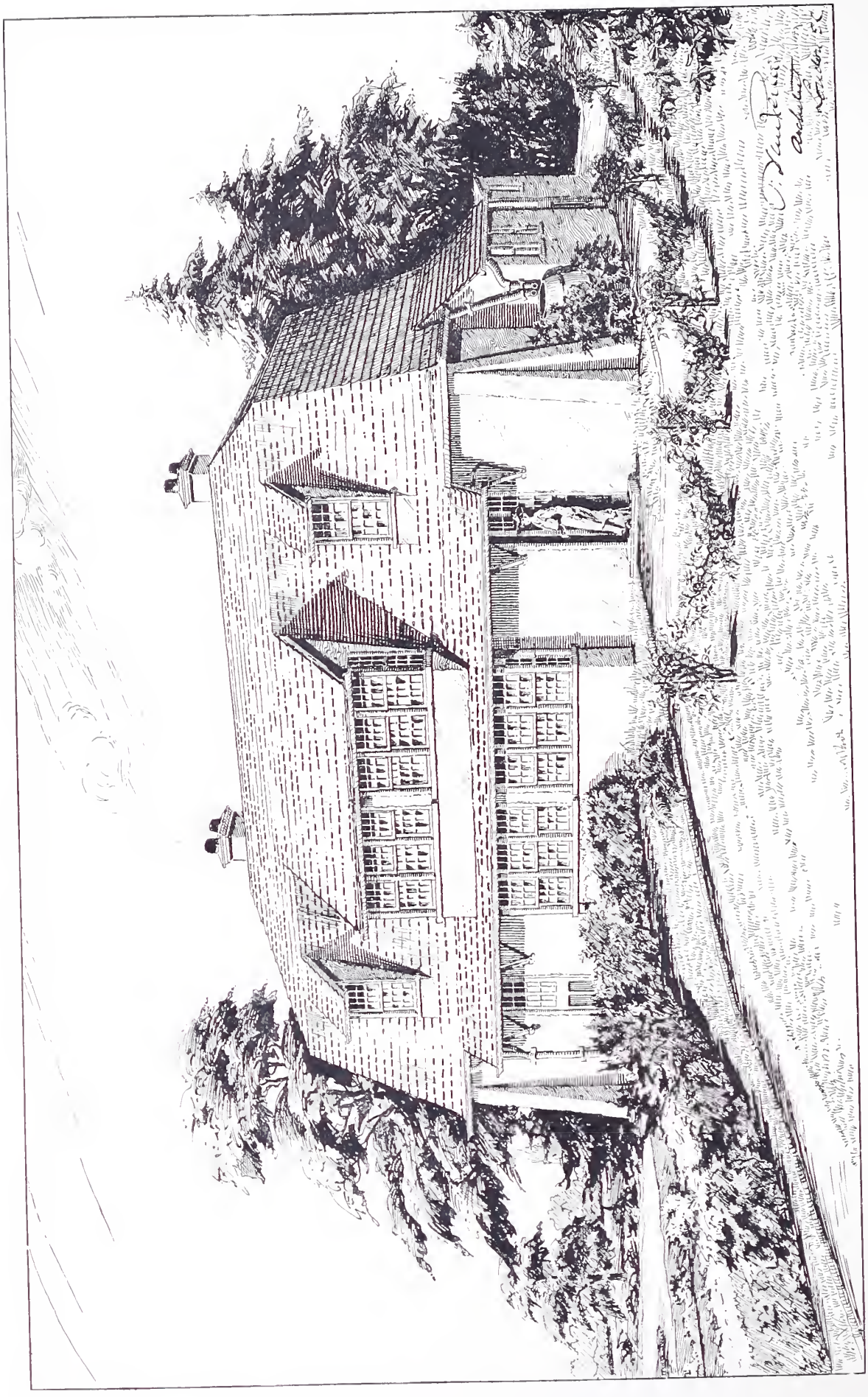
The whole of the walls and ceilings are plastered throughout with "Pytho," a special preparation having the properties of cement; it dries quickly, has a very hard and smooth surface, and may be decorated within 48 hours of completion.

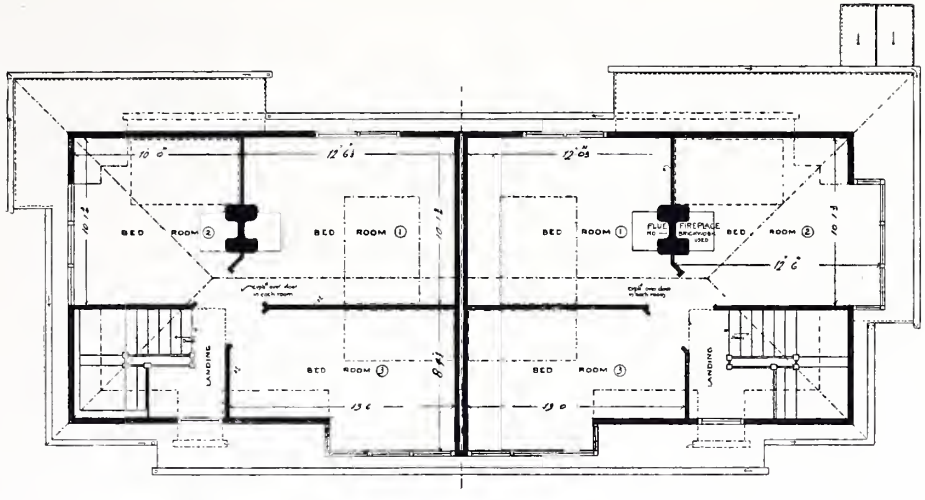
It would be impossible to erect houses having this accommodation other than with a mansard roof at the prices named below.

The houses are set back 45 ft. from the roadway. They are being built by contract.

The alternative cost of each house is as follows:—

| Without builder's profit:— | £ | s. | d. |
|---|---|---|---|
| (a) Excluding "Model Cottager" and replacing by an ordinary kitchener and without bath ... ... ... ... ... ... ... | 128 | 0 | 0 |
| (b) Including "Model Cottager" and bath ... ... ... ... | 138 | 0 | 0 |
| Or, including builder's profit (a)... ... ... ... ... .. | 140 | 16 | 0 |
| ,, ,, ,, (b)... ... ... ... ... ... | 150 | 0 | 0 |






First Floor Plans

Classes 2 and 4

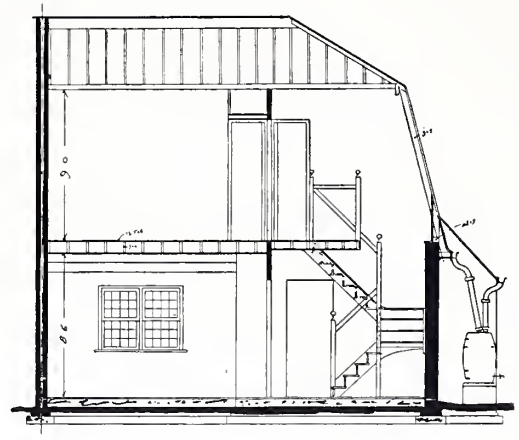
Cheap Cottages Exhibition

Pair of Cotages to be erected on

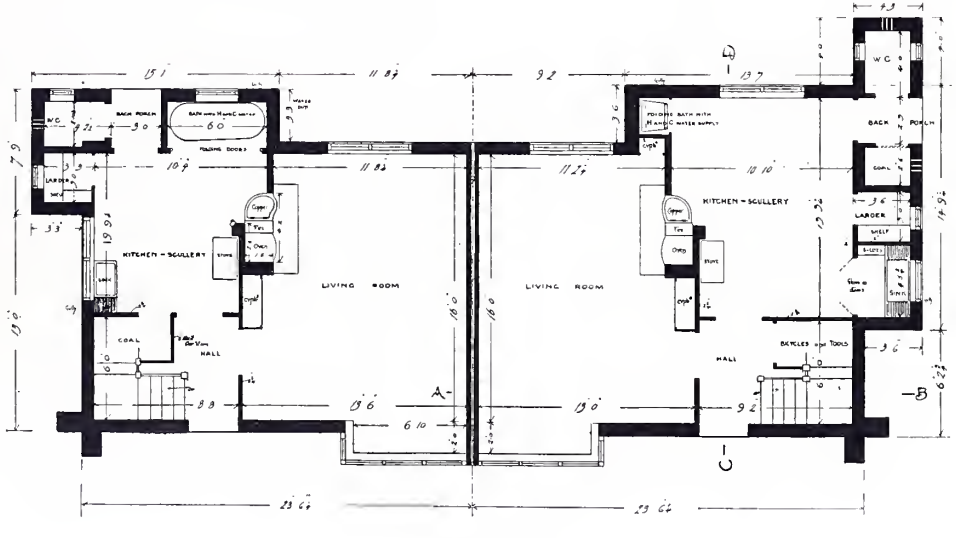
Plots 469-466

For the

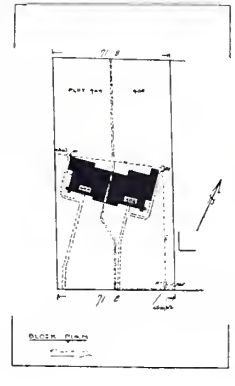
Letchworth Building Syndicate

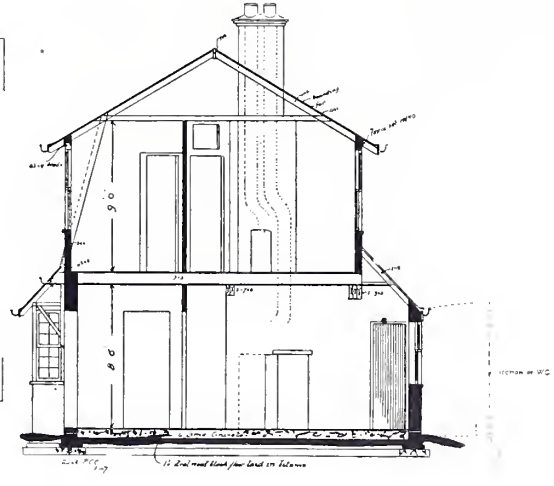


Section A B




Ground Plans



Section C D.

Architect
8 Frederick's Place
Old Jewry
E C

Cost per foot cube is $4\frac{1}{4}d.$, including builder's profit.

## COTTAGE DESIGNED BY MR. A. H. CLOUGH, ARCHITECT.

This cottage has been found by Mr. Clough to be the cheapest possible form of six-room brick-and-tile cottage. It will probably be built at the Garden City for from £130 to £140. In Mr. Clough's view it is larger than is needed for the ordinary agricultural labourer, who can barely afford rent for a four-roomed cottage, certainly not for a six-roomed one. Three bedrooms, however, cannot be satisfactorily placed in an upper story over only two sitting rooms. Accordingly, in a cottage with three bedrooms and two sitting rooms, one of the bedrooms must be on the ground floor. Mr. Clough is showing three other cottages following this plan. The type of six-room cottage now shown has been built by him in Sussex and Hampshire.

## THE NOOK COTTAGE, DESIGNED BY MR. GEORGE E. CLARE, M.S.A., ARCHITECT.

This cottage is entered in the class or labourers' cottages in rural districts, and also for the class for concrete construction.

The system of construction is as follows:—The special light iron and wood skeleton framework—costing about 50s. each cottage—is set up on the foundations, and the roof plate fixed to it; by means of rough planking the concrete is then filled in and at the same time the roof timbers and ceiling joists can be fixed and the chimney breasts built, and, by the time the concrete is finished, the roof and chimney could be completed.

The "double Roman" tiles made by Messrs. Major, of Bridgwater, are merely laid one over the other on battens 15 in. apart. A square can be laid in an hour, and it is quite possible to cover in the roof in a day.

When the outside walls are being carried up, the door frames are set in position and the fireproof slab partitions fixed, not needing any special skill. Thin fireproof plaster slabs are then fixed to the ceiling joists, and plastering outside and in carried out, the inside only requiring one thin coat if the concrete is neatly done. The doors and casements are then hung, ironmongery fixed, and the sanitary washable distempering and "Solignum" staining to the joinery inside and out applied, which, by the way, is a better preservative for the wood and much more durable than paint.

No parlour is added to this cottage, as it is deemed unnecessary and inadvisable for the labouring classes, but, for foremen and better-class working-men, the kitchen could be easily enlarged and used for taking meals, and the other room used as a sitting-room.

Ample cupboards are provided, also a linen airing cupboard over bedroom grate in chimney breast.

The following are the chief points in this cottage:—

1. All rooms arranged on one floor, thus simplifying the construction and avoiding costly scaffolding and reducing the construction to the utmost simplicity.

2. A sound and durable cottage, practically fireproof, at the same price as a portable and inflammable timber-built cottage.

3. Floors and partitions absolutely solid, and no unseen spaces anywhere below ceiling for harbouring vermin.

4. Avoidance of mouldings that harbour dust.

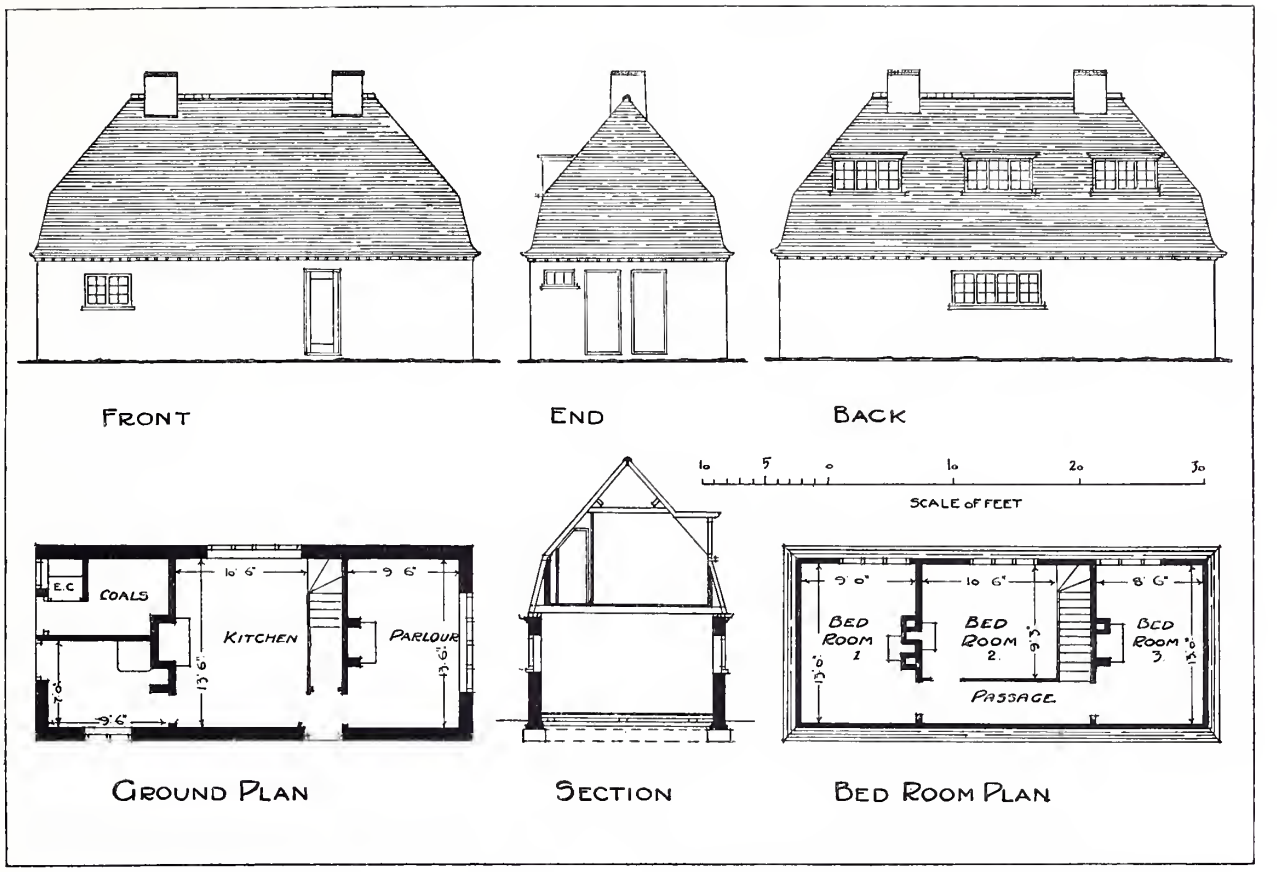
5. Strict economy in cost, without sacrificing stability or durability.

6. The recessed inglenook for sitting round the fire, leaving the major portion of the room clear for a table and other furniture, the box of seat being used for storage.

7. The range, combining a large open fire for burning wood as well as coal, a large oven at a convenient height, a hot plate, a copper with hinged lid, heated by same fire, and hot supply to bath.

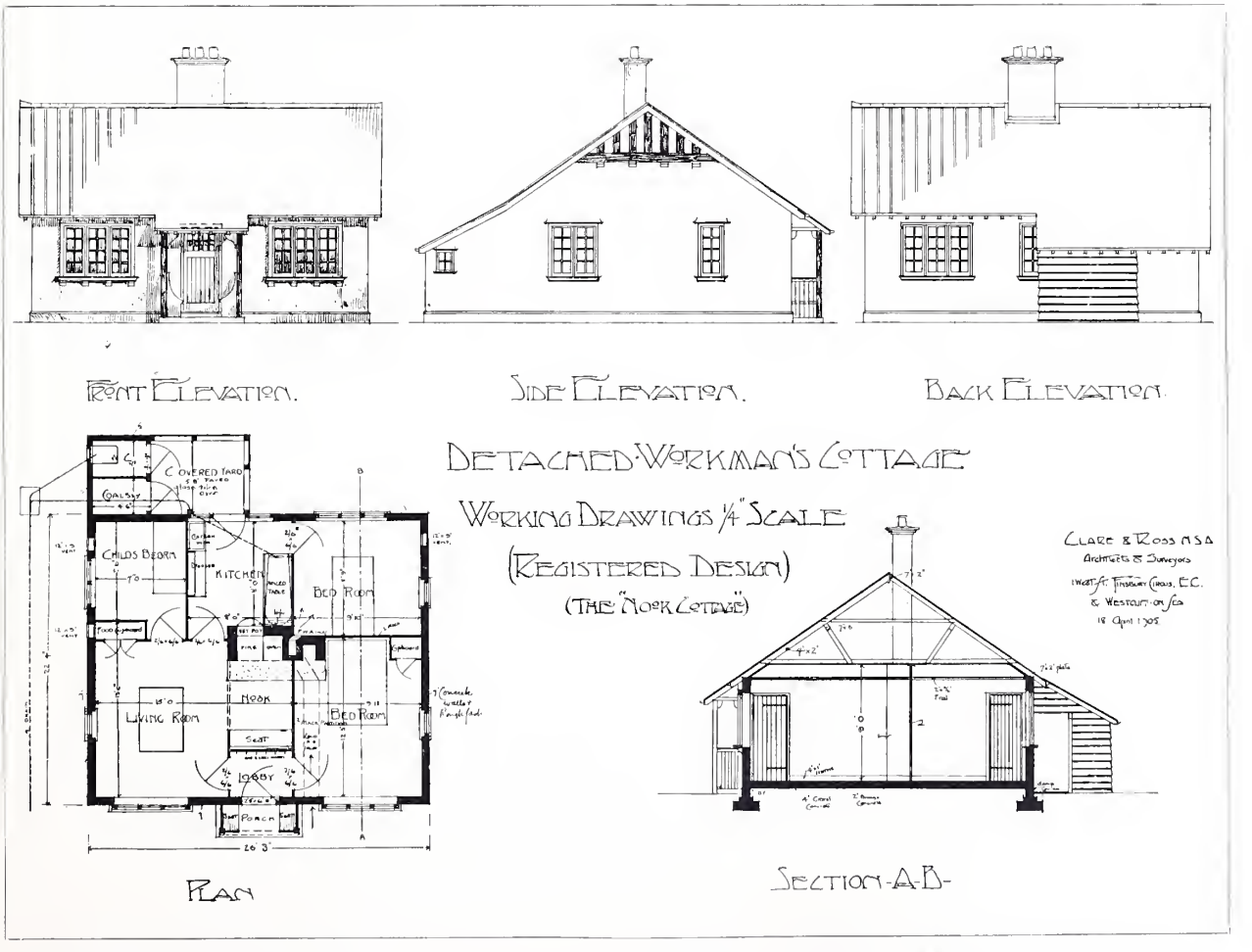
8. A combination bath and sink, effecting a saving of space in scullery.

The cost of the cottage will vary slightly according to the district, but in fairly accessible districts it has been built for £150 complete, ready for occupation, and where three or more are built on an estate at one time, the cost would not exceed £145.




Cost per foot cube, 4*d*. to 5*d*.

[*A. H. Clough, Castletop Estate Office, Burley, Ringwood, Hants.*




Cost per foot cube, 4*d*.

[*Clare & Ross, Architects, 1, West Street, Finsbury Circus.*

## COTTAGE DESIGNED BY MR. GILBERT FRASER FOR THE CONCRETE MACHINERY COMPANY.

This cottage, which will be thoroughly decorated and furnished in a simple but artistic manner, is entered in the £150 class, the materials and all requirements as to building bye-laws being complied with.

Every comfort has been studied for the occupant of this cottage. The kitchen is fitted with an "Ellco" range, which supplies hot water to a folding bath (supplied by Ellkay & Cornes, Limited, London). It is conveniently arranged in a small recess in the scullery, and, adjacent thereto, is a fire-heating boiler; hot water is also drawn from the kitchen range.

The cottage should not be regarded exclusively as a working man's dwelling. On the ground floor there is the parlour or living room, a kitchen, scullery and larder, with coals and w.c. outside. A staircase leads from the small front entrance hall to the three bedrooms above. The design is on simple rectangular lines, and is in every way most suitable to the concrete materials employed in the building.

The structure itself is unique in that, whereas it has the face of chiselled and ashlar stone, every block was made on the very site itself on the simple portable hand-power "Pioneer" machine, from aggregate on the spot, within two weeks of staking off the plot.

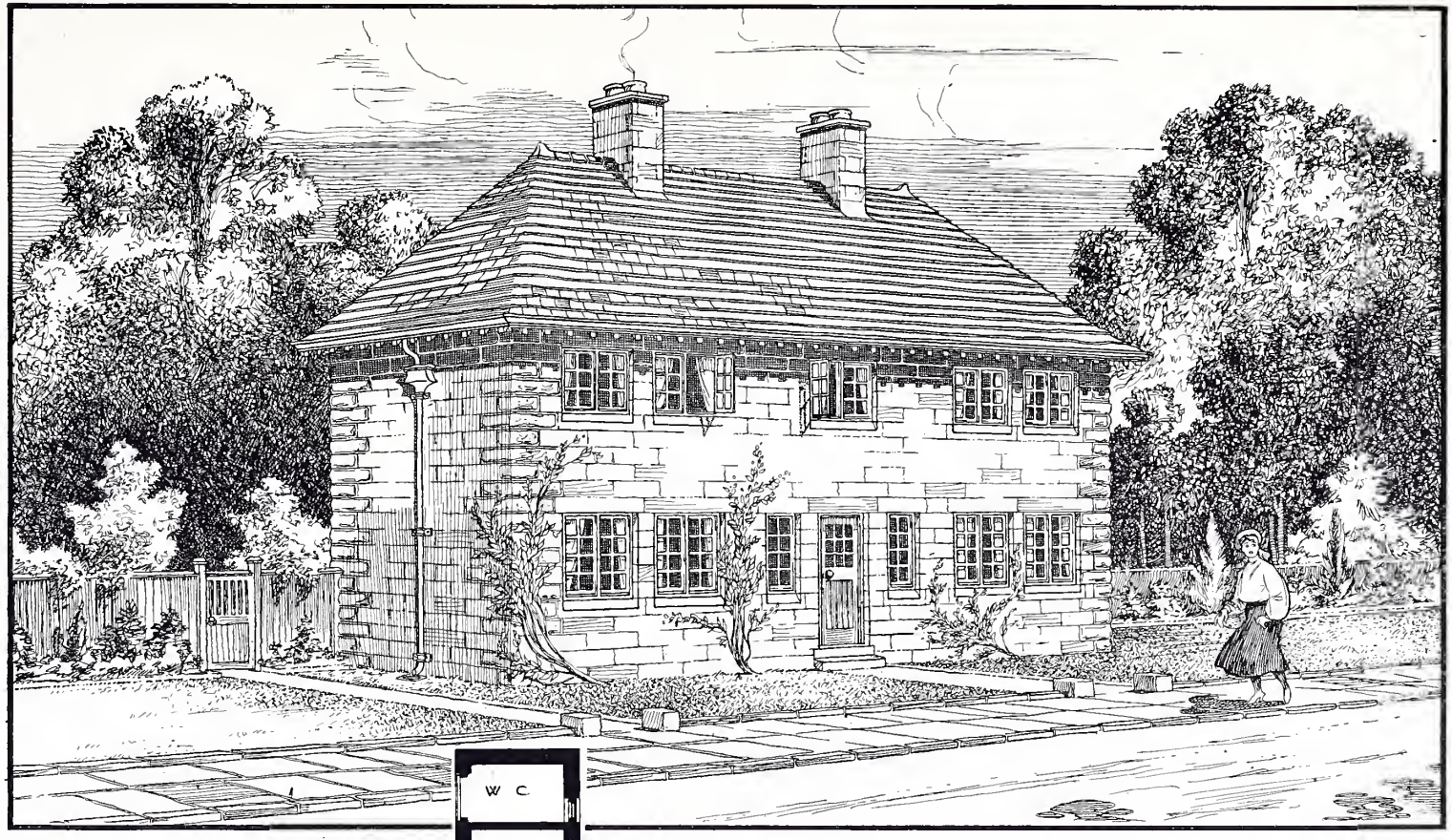
The building is composed of straight, corner, joist, half and quarter blocks, turned out just as desired, no change on the machine requiring more than ten minutes, and, as the minimum output is 150 blocks (each 32 in. by 10 in. by 9 in.) per day, it can be easily understood how rapidly the materials for walls can be produced, besides which, vexatious delays from manufacturers are obviated.

The machine itself is extremely simple and is so portable that it can be moved from one site to another in a wheelbarrow.

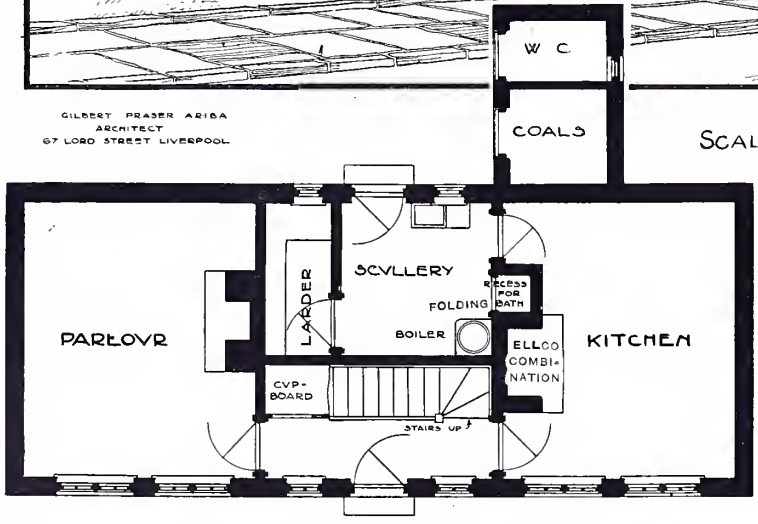
Heretofore, the objections to concrete buildings has been that the appearance was much against them, and, in order to obviate this, rough casting or pebble dashing over the surface had to be resorted to. Owing to the methods of working the concrete in this machine, the outer face comes from it beautifully finished, while the inner face is ready for the plastering, without furring or lathing; thus, economy is reached both within and without.

The material—concrete—is accepted by all authorities as being fireproof and durable, and furthermore, its good qualities improve with age, which cannot be said of many qualities of brick or stone.

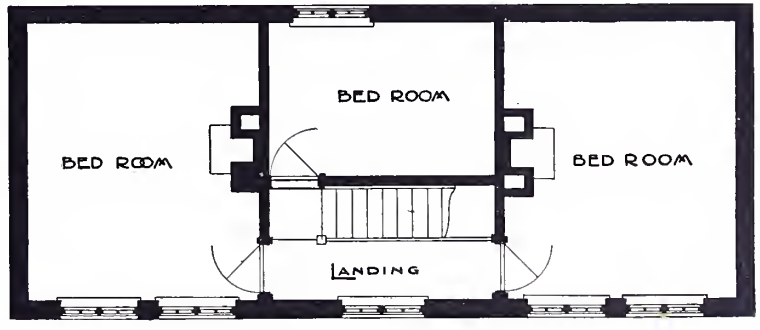
The machine would be a most useful addition to every large estate, as well as every builder's yard, and, in fact, the manufacture and sale of the blocks should prove most remunerative.



GILBERT FRASER ARIBA
ARCHITECT
67 LORD STREET LIVERPOOL




GROVND FLOOR PLAN




FIRST FLOOR PLAN

SCALE OF 10 5 0 10 20 FEET

Cost per foot cube, $3\frac{1}{2}d.$

[*For the Concrete Machinery Co., Liverpool.*

## COTTAGE DESIGNED BY MR. W. T. ALLEN, F.R.I.B.A., AND CONSTRUCTED BY MESSRS. SHROUDER AND MATTHEWS.

This design is entered in response to the advertisement for a cottage that could be built for £150, giving a large living room, scullery, and three bedrooms of 2,000 cubic feet, of which the largest should contain 1,000 cubic feet, to meet the wishes of the First Garden City Company, where the cottage is being erected for exhibition. The largest bedroom contains 1,025 ft., and the other two are 750 and 650 ft. cube respectively.

The design contains living room, scullery, larder and pantry, coal store under stairs, w.c., and a barn or tool-house, a necessary adjunct to a labourer's cottage.

The cottage is being built up in 9 in. brickwork to the level of the window sill, where there is a continuous Broseley tile weather course round the outside, and a rounded wooden ledge on the inside, forming the set off. Above this the work is carried up in timber framing, plastered both inside and out, thus leaving a hollow space between the inner and outer surfaces, and ensuring dry and healthy rooms. Were this method always adopted for bedrooms instead of the damp 9 in. brick wall, we should hear less complaint of consumption, weak and sore eyes, delicate health, and many other illnesses arising from damp houses. The roof is covered with local tiles.

This design is registered, and the cottage is being erected by Messrs. Shrouder and Matthews, builders, of Stevenage, for £150.

It could be built probably a little cheaper if the largest bedroom were reduced to 850 cubic ft. instead of 1,000.

This design is not intended for a town cottage, where the labourer *will* have his little front parlour; it is essentially a rural labourer's cottage, designed after careful study of the habits of such people.

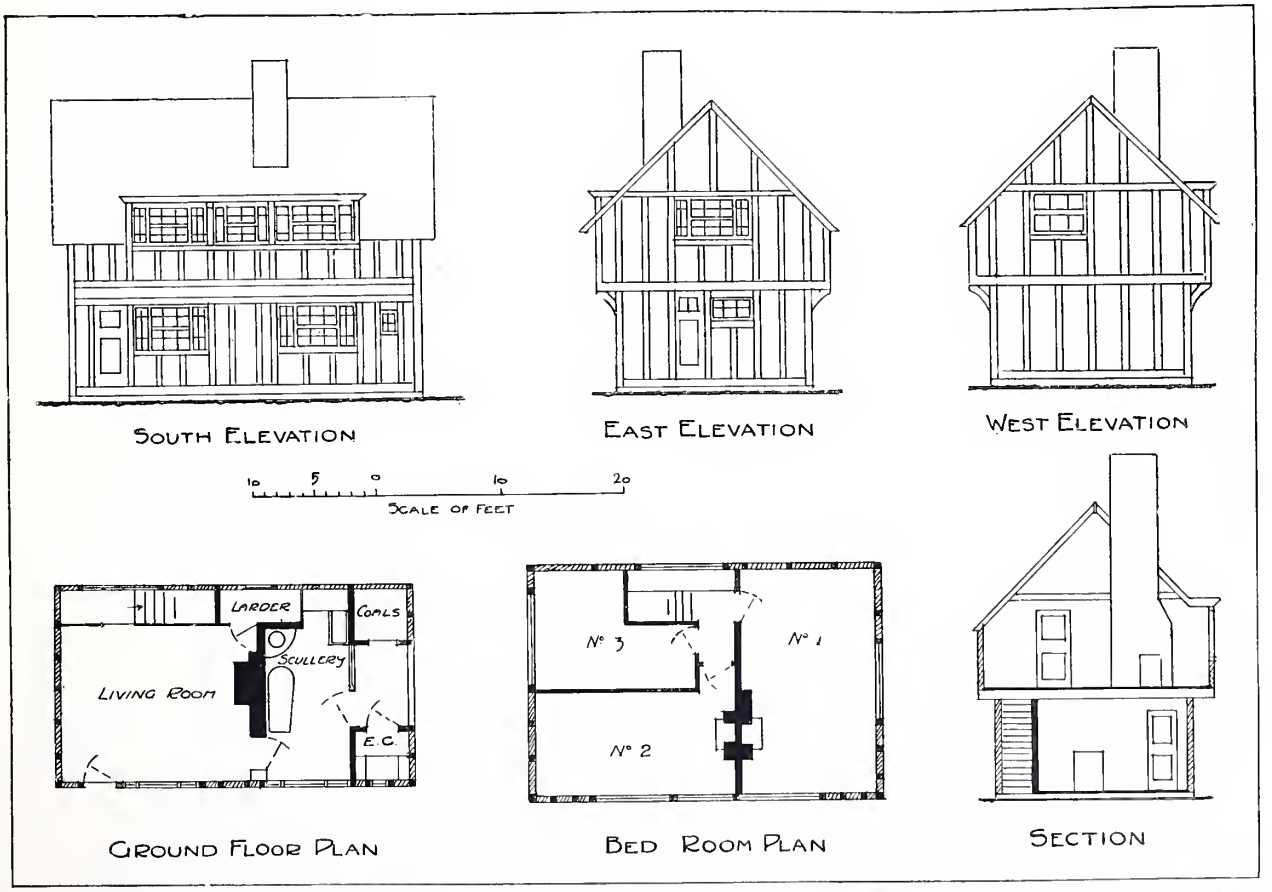
Total number of cubic feet is 7,700.

## COTTAGE DESIGNED BY THE SOCIETY OF ARTISTS.

The house will show dark timber framing outside with concrete filling, rough-cast. Hot and cold water are arranged over bath and sink. The scullery opens on to a verandah with sunny facing, so that the work of the house can be done under pleasant conditions. The living room is large, and one end is railed off where staircase leads to upper floor, so that much air space is secured to the living room. The windows are long in proportion to their height, and are set so that they frame the landscape showing sky and garden to form a pretty picture. Upstairs there are three bedrooms, one being large, for two beds. The effect of the cottage, when built, will be old English, plain and direct without ornament. The total cost is £150.

Cost per foot cube, $4\frac{1}{2}d.$

[*W. Taprell Allen, F.R.I.B.A., Architect and Surveyor, Stevenage, Herts.*




Cost per foot cube, 4*d.*, cost price.

[*The Society of Artists, 52, New Bond Street, W.*

## COTTAGES ERECTED AT LETCHWORTH GARDEN CITY FOR THE BOURNVILLE VILLAGE TRUST, UNDER CLASSES 1 & 4.

The cottages are being erected with a view to proving that a comfortable substantially built cottage can be erected with bricks, tiles, good timber and construction, to let at a labourer's rental, and pay a good return on the outlay. Utility and proportion are striven for without ornament. The special features are:—

1. That every room has a separate entrance, thus providing for the maximum of home comfort and decency, not obtainable in passage room.

2. That a bath is provided in each house. In the single cottage is a bath, which can be fixed and cased complete for £3 5s., and in Class 4 the hot water service, including bath, can be installed in a separate first-floor bath room, at a cost of £9 9s. per house.

3. That in Class 4 an ample tool-house is provided to avoid unsightly tenant's fixtures.

4. That a complete house is provided for, with drainage, gas service, etc., as erected at Bournville, including "Tobin" ventilators.

5. That the deduction of items recognised as extras would, if published previously, have served to good purpose in improving a cheap cottage (see accompanying statement).

*Statement showing Estimated Cost of Erection.*

Class 1.—£150 house.

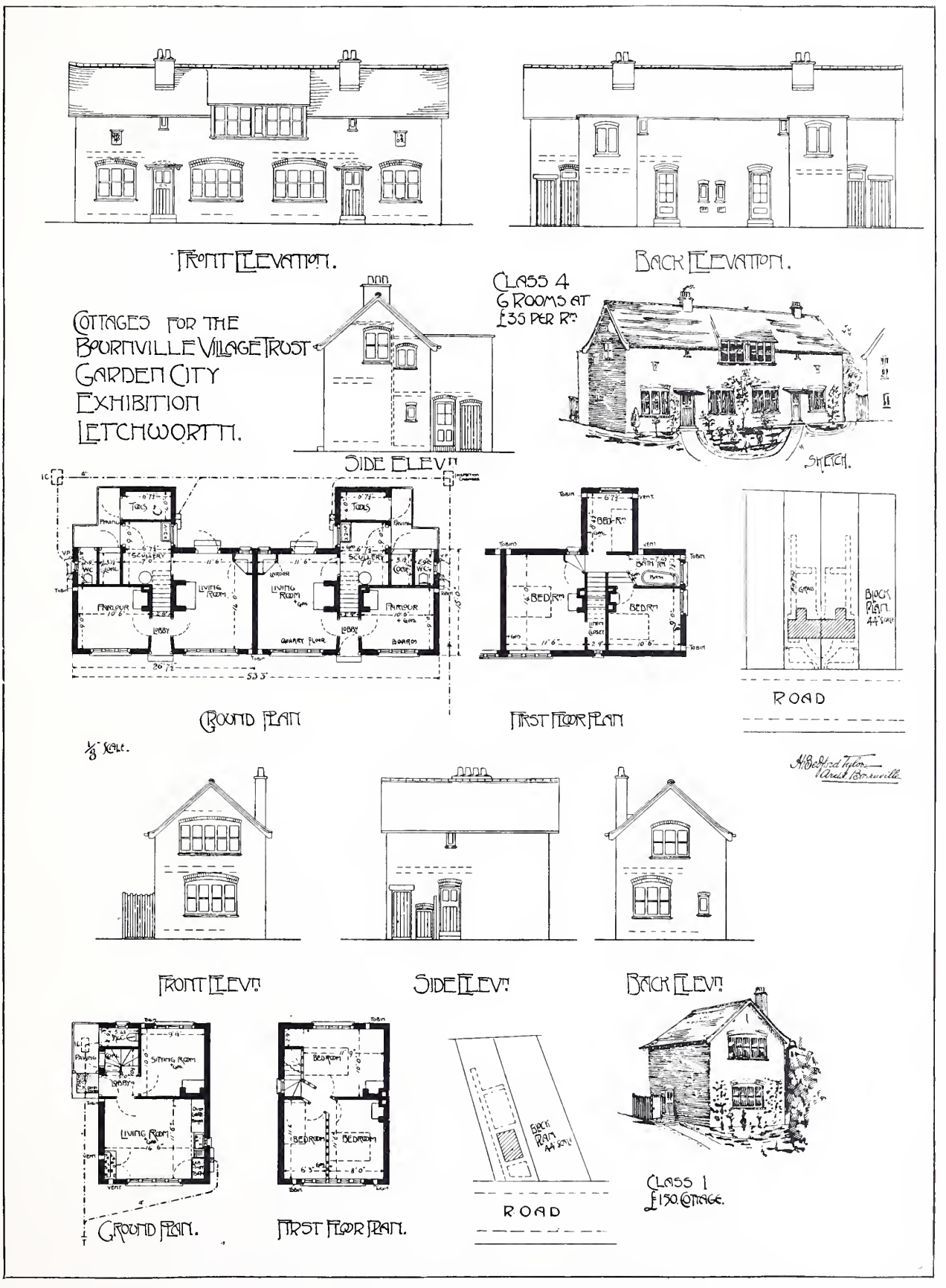
| | £ s. d. | £ s. d. |
|---|---|---|
| Contract for Single Cottage ... ... ... ... | | 149 0 0 |
| Deduct items recognised as extras:— | | |
| Drain connection to sewer ... ... ... ... | 3 5 0 | |
| Gas service and pipes ... ... ... ... ... | 2 16 0 | |
| Contingency ... ... ... ... ... ... | 5 0 0 | |
| Builder's profit, say, 5 per cent. ... ... ... ... | 7 10 0 | |
| | | 18 11 0 |
| | | 130 9 0 |
| Add extra for tiles in lieu of slates *to comply with Garden City requirements* ... ... ... ... ... ... | | 8 0 0 |
| | | 138 9 0 |
| If bath allowed as an extra, deduct ... ... ... ... | | 3 5 0 |
| | | 135 4 0 |
| Cubical contents, 7,500 feet. | | |

Class 4.—Pair of six-roomed Cottages at £35 per room.

| | £ s. d. | £ s. d. |
|---|---|---|
| Contract for pair ... ... ... ... ... ... | | 402 0 0 |
| Deduct items recognised as extras:— | | |
| Drain connection to sewer ... ... ... ... | 3 5 0 | |
| Gas service and pipes ... ... ... ... ... | 2 16 0 | |
| Contingency ... ... ... ... ... ... | 5 0 0 | |
| Builder's profit, say 5 per cent. ... ... ... ... | 20 0 0 | |
| | | 31 1 0 |
| | | 370 19 0 |
| Add extra for tiles in lieu of slates ... ... ... ... | | 17 0 0 |
| | | 387 19 0 |
| If bath and hot water service allowed as an extra, deduct... | | 18 18 0 |
| | | 369 1 0 |

Cubical contents, 18,300 feet at $4\frac{7}{8}d.$, or say £31 per room.

The cost per foot cube is estimated at $4\frac{2}{5}d.$ for the single cottage, and $4\frac{7}{8}d.$ for the pair.




Cost per foot cube, $4\frac{2}{5}d.$ for single cottage; $4\frac{7}{8}d.$ for pair of cottages.

## £150 COTTAGE, DESIGNED BY MESSRS. BENNETT AND BIDWELL, ARCHITECTS.

This cottage was designed for the competition in Class 1 for the best cottage, not to cost more than £150. As there are very few places in England where a brick cottage can be built for £150, this cottage has been constructed chiefly of weather boarding on a wooden framing, the large living room only having brick walls all round. The construction, weather board externally and plaster internally, makes a warm, dry cottage, the cavity between the two materials keeping it cool in summer and warm in winter. The cottage was designed for a pantile roof, pantiles being considerably cheaper than the commonest slates and of a very much more pleasing appearance, harmonizing with the Hertfordshire district in a way slates never do. It is not necessary to say much about the plan. The principal entrance is arranged to the road, the living room has its windows to the south-east and south-west. The doors into this room have all been kept at one end, so as not to spoil the comfort of the room, and to leave a warm, comfortable corner next the fire. The kitchen faces south-east, and is provided with copper, sink, bath, also opening for extra range, and place for mangle, if required. The stairs, which go up out of the front lobby, lead to three good bedrooms, two with fireplaces, and a box-room. Cubic contents of living room 1,312 ft., large bedroom 1,002 ft., and the two smaller bedrooms 761 and 726 ft. respectively.

## COTTAGES DESIGNED BY THE CO-PARTNERSHIP TENANTS' HOUSING COUNCIL, LIMITED.

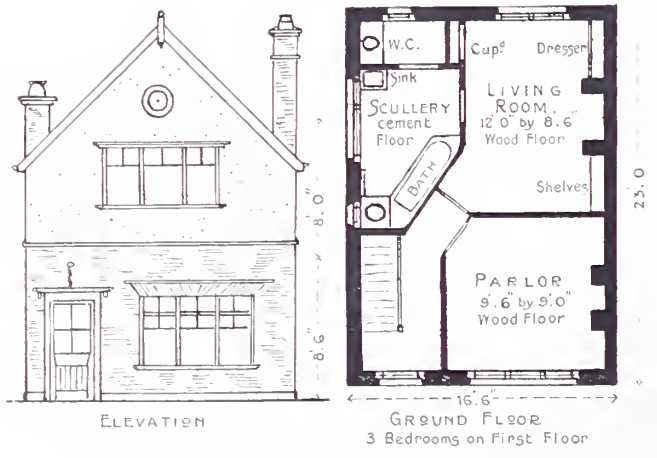
These cottages are built of 9 in. brickwork, with vitrified blue-brick under asphalte damp course and tiled roofs, and will cost £300 per pair, or about 4*d*. per cube foot: they are pretty, with good rooms and convenience; bath fed with hot water from copper, sink, etc., cupboards in bedrooms, and large dresser in living room, the floor of which is of Jarrah wood joists and flooring. The fireplace for kitchener in this room is of glazed bricks. There are ventilators in every room; water-closet, coal-house and tool cupboard.

The rain water is laid to fall into rain water butts; water for drinking and domestic purposes is obtained from Water Company.

The drains fall into cesspool, with all proper ventilating pipes, etc.

The sizes of rooms are marked on plan, height 9 ft. on ground floor and 8 ft. upstairs.

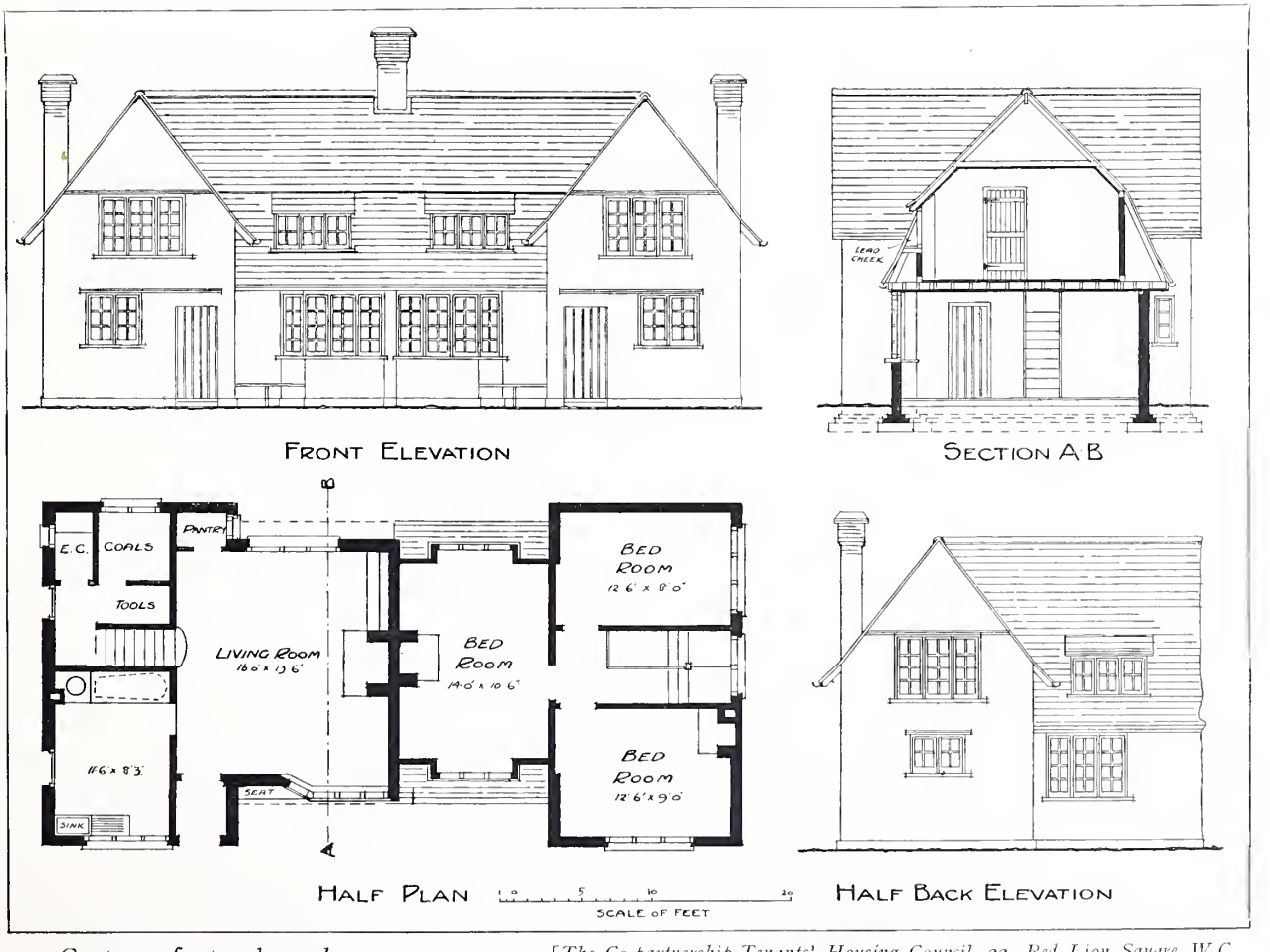
The annexed illustration shows the plan and elevation of a small single cottage erected at Garden City by the Ealing Tenants, Limited, a branch of the same Society.




Cottage at Letchworth, by the Ealing Tenants, Limited.

Cost per foot cube, $3\frac{3}{4}d.$ for the Exhibition; actual cost, $4\frac{1}{2}d.$

[*Robert Bennett, A.R.I.B.A., and Wilson Bidwell, Architects, Letchworth.*




Cost per foot cube, $4d.$

[*The Co-partnership Tenants' Housing Council, 22, Red Lion Square, W.C.*

Cost per foot cube, 4*d*., including profit.

## TWENTY-TWO HOUSES, STATION ROAD EAST, SIX FOR G. CHRISTIE MILLER, ESQ., AND SIXTEEN FOR THE LETCHWORTH BUILDING SYNDICATE.

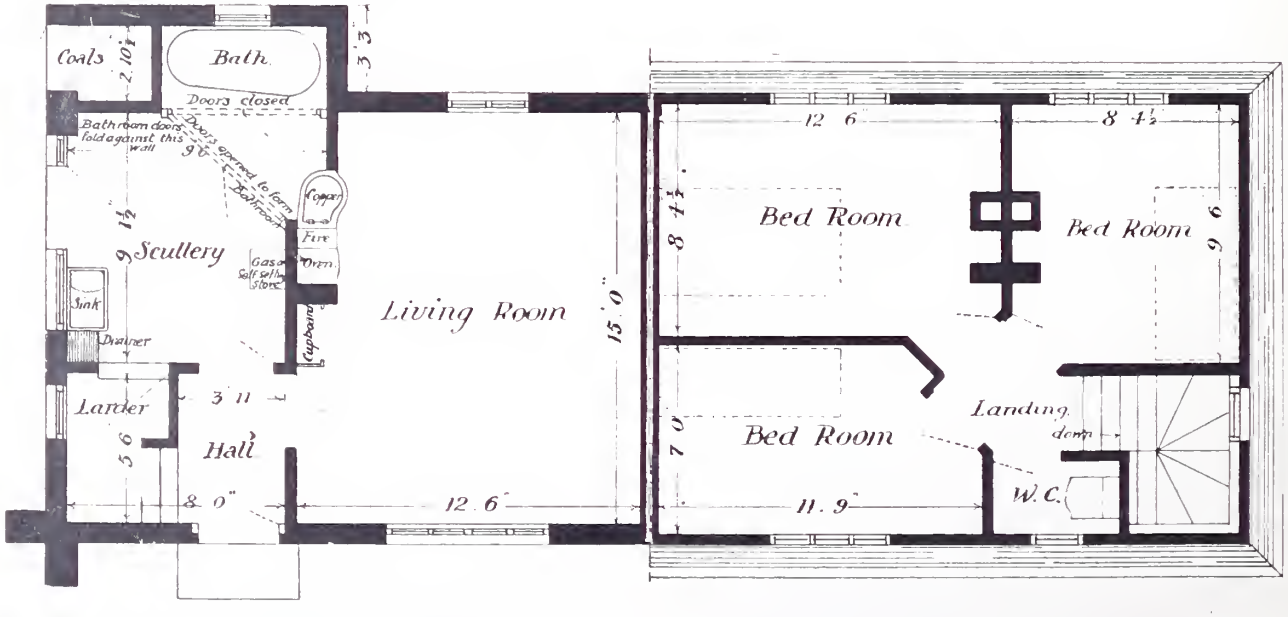
### CLASSES 2 & 4.

These twenty-two houses, all of similar design, are being erected, not on the Exhibition ground, but on a site situated in Station Road East.

A small staircase-hall gives access to the living room and scullery. The living room, having only one door, is particularly free from draughts; the "Model Cottager," known as "Cornes' Apparatus," fully described on page 127, is fitted in the kitchens of all these houses, securing an ample supply of hot water for the bath, which is fitted in the recess in the scullery.

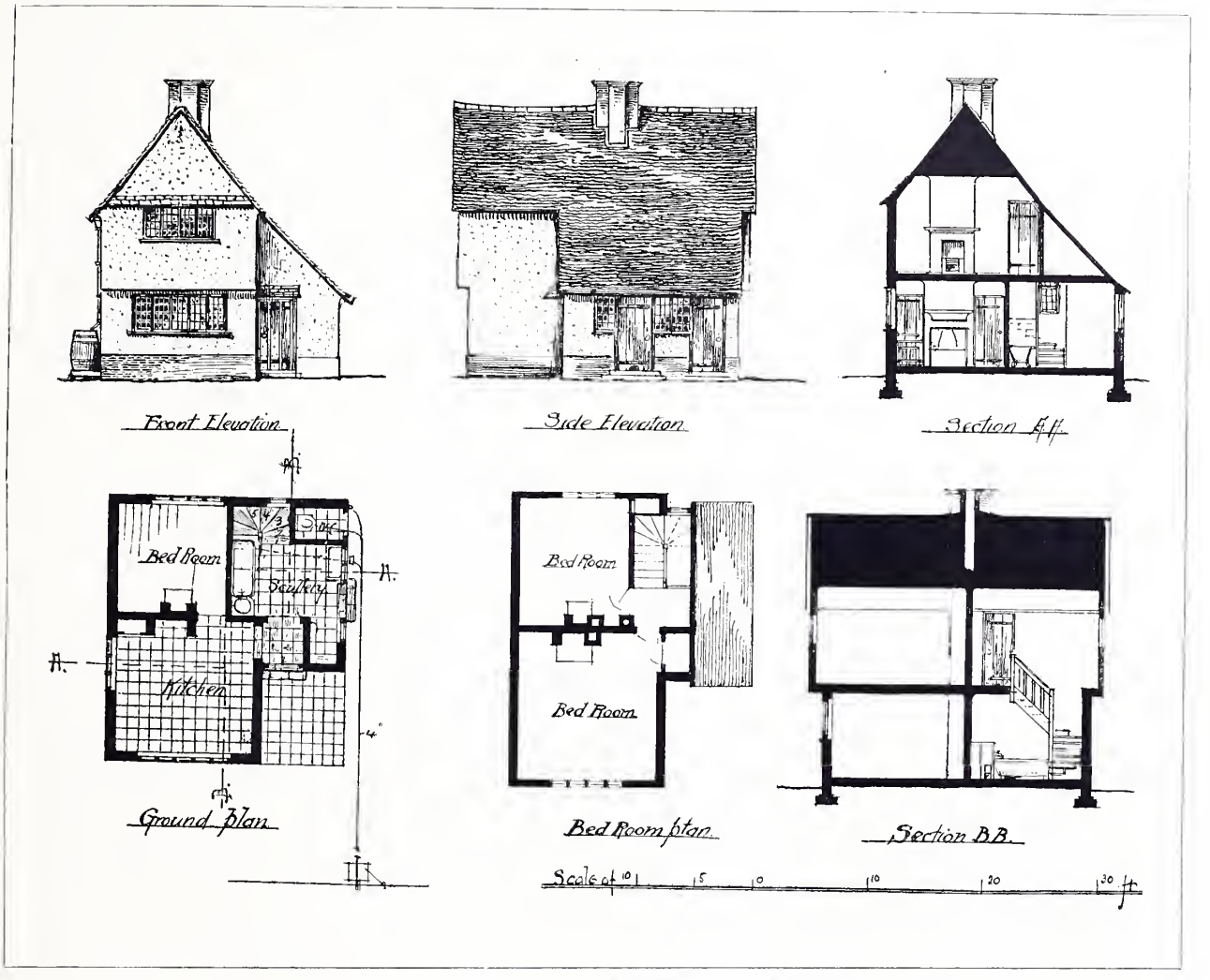
The bedrooms are formed in the mansard roof, this method of construction being the cheapest.

The cost is £120 per cottage, *excluding* builder's profit and the "Model Cottager" and bath; if these items are included, the total cost will be £146 per cottage. The architect is Mr. V. Dunkerley, of No. 8, Frederick's Place, Old Jewry, London, E.C.




*GROUND PLAN.* *FIRST FLOOR PLAN*

[*V. Dunkerley, Architect.*




[*Williams & Hodgson, Architects, 3, Staple Inn, Holborn, E.C.*

## COTTAGE DESIGNED BY MESSRS. WILLIAMS AND HODGSON, ARCHITECTS.

The plan of this cottage is very simple and self-explanatory. The ground floor bedroom can, of course, be used as a parlour, but it is usually found that a sitting-room, as such, is rarely used in a cottage.

The bricks are patent hollow bricks, covered with rough cast, except in the case of the chimneys, where a thinner red brick is used.

The tiles are hand made, with sanded surface.

The general style of the building is on the same lines as some of the old cottages in Hertfordshire.

The total cost is estimated at £150.

The cottage is entered for Class 1 of the competition.

## COTTAGES DESIGNED BY MR. W. W. JUDGES, ARCHITECT.

The cottages are brick-built all the way up, on concrete foundations. The walls to first floor are built 11 in. thick, "hollow," with good red facing bricks; the walls to the upper story are built 9 in. thick with ordinary bricks, with half timbers planted on face of the wall outside, and filled-in spaces rendered in rough-cast plaster and dashed with sea shingle. The roofs are covered with red plain tiles. The cost is from £325 to £350, according to position and situation for site and carriage. The cottages are five-roomed, three bedrooms, with a good larder and sanitary arrangements under one roof. One principal feature in the cottages is that they are all self-contained dwellings, viz., that by entering the front lobby on the ground floor you can enter either of the living rooms or the parlour quite separate and distinct from another room. Also, on the first-floor landing, you can enter either of the three bedrooms quite separate and distinct from the others.

## SINGLE COTTAGE DESIGNED BY MR. HARRY PRINCE, ARCHITECT.

The cottage is being erected for competition in Class 1 as a £150 cottage, the site being No. 491 in the town area. The chief points to be noticed in the design are: (1) Of the bedrooms, one being planned on the ground floor; (2) porch; and (3) central staircase leading to landing on first floor, with doors right and left. The walls of structure are composed of brick-nogging covered externally with rough-cast and plastered internally. Sills to windows, which latter are wood casements, are formed by two courses of tiles in cement. The roof is covered with local pantiles. The ground floor is covered with a layer of cement concrete finished with boarding in living rooms, and floated with cement in offices. Upstairs, the floors are boarded on fir joists.

## SINGLE COTTAGE DESIGNED BY MR. LIONEL F. CRANE, ARCHITECT.

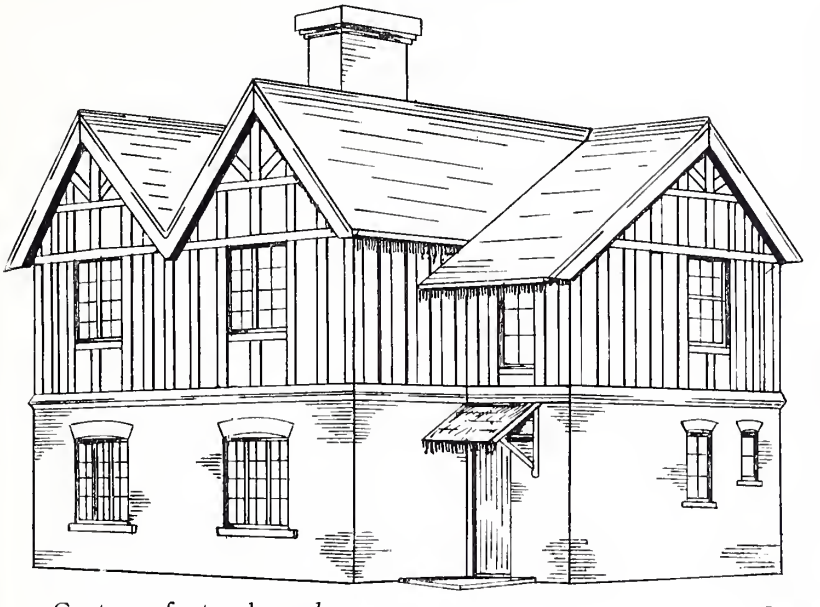
The cottage is entered for the £150 cottage competition.

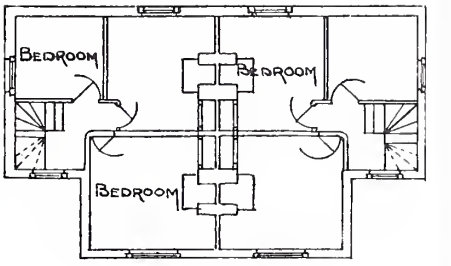
The plan consists of a living room fitted with kitchener, scullery with bath, etc., larder, fuel shed, and w.c. There are three bedrooms on the first floor.

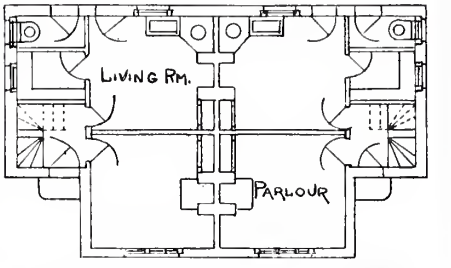
The cottage is a timber-framed building, covered with weather boarding, and plastered inside, with a tile roof.

The framing rests on a concrete foundation, with a slate damp course. There is a 6 in. layer of cement concrete under all the floors. The living room has a wood block floor. The chimney-stack is of brick on concrete foundation.

The estimated cost, exclusive of drainage, is £150.

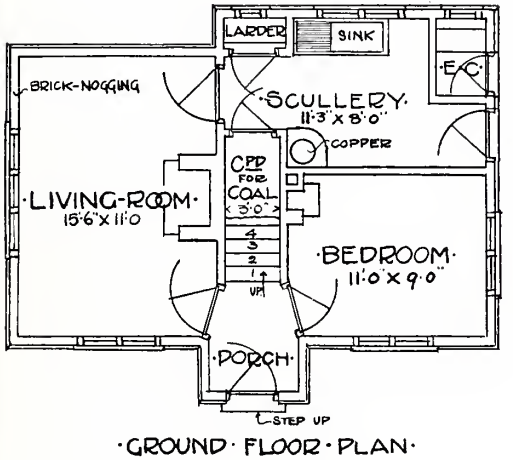




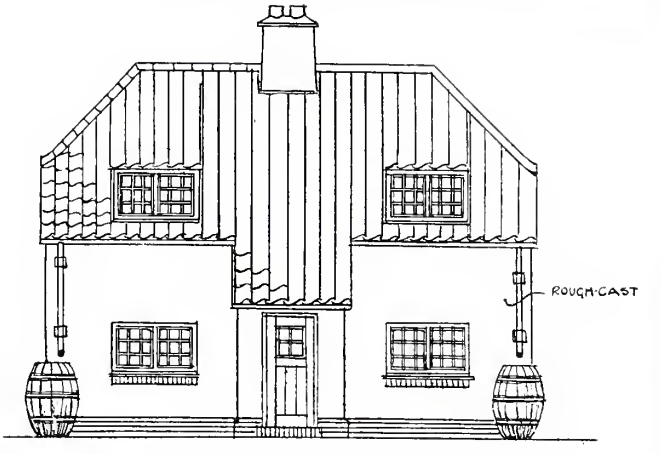




Cost per foot cube, 5*d*.

[*W. W. Judges, Architect, Boughton. Faversham.*



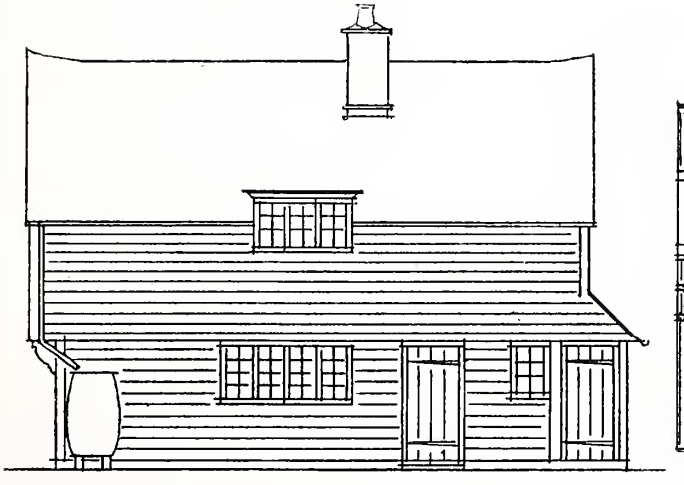

·GROUND·FLOOR·PLAN·



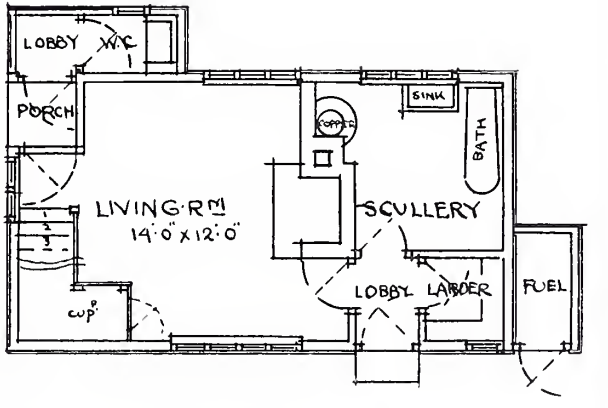

·SOUTH· ELEVATION·

Cost per foot cube, 5*d*.

[*Harry Prince, Architect, 15, Clifford's Inn, E.C.*



ELEVATION·




PLAN

Cost per foot cube, $3\frac{3}{4}d$.

[*Lionel F. Crane, Architect, Old House, 13, Holland Street, Kensington.*

## PAIR OF COTTAGES, NORTON, HERTS, DESIGNED BY GEOFFRY LUCAS, A.R.I.B.A., ARCHITECT.

This pair of cottages has been built on the Norton Road of the Garden City Estate.

The accommodation on the ground floor consists of a front room, in one case, 17 ft. by 10 ft. 6 in., with stairs rising from it; in the other, 14 ft. 6 in. by 10 ft. 6 in.; a living room in one case 17 ft. by 10 ft. $4\frac{1}{2}$ in., with stairs rising from it; in the other, 14 ft. 6 in. by 10 ft. $4\frac{1}{2}$ in. The living rooms contain dressers and baths, with hot supply from the coppers, and moveable wood covers. Sculleries with copper, sink, etc. Larder, coal place, and earth closet adjoin each living room.

Upstairs each cottage has three bedrooms, two having fireplaces.

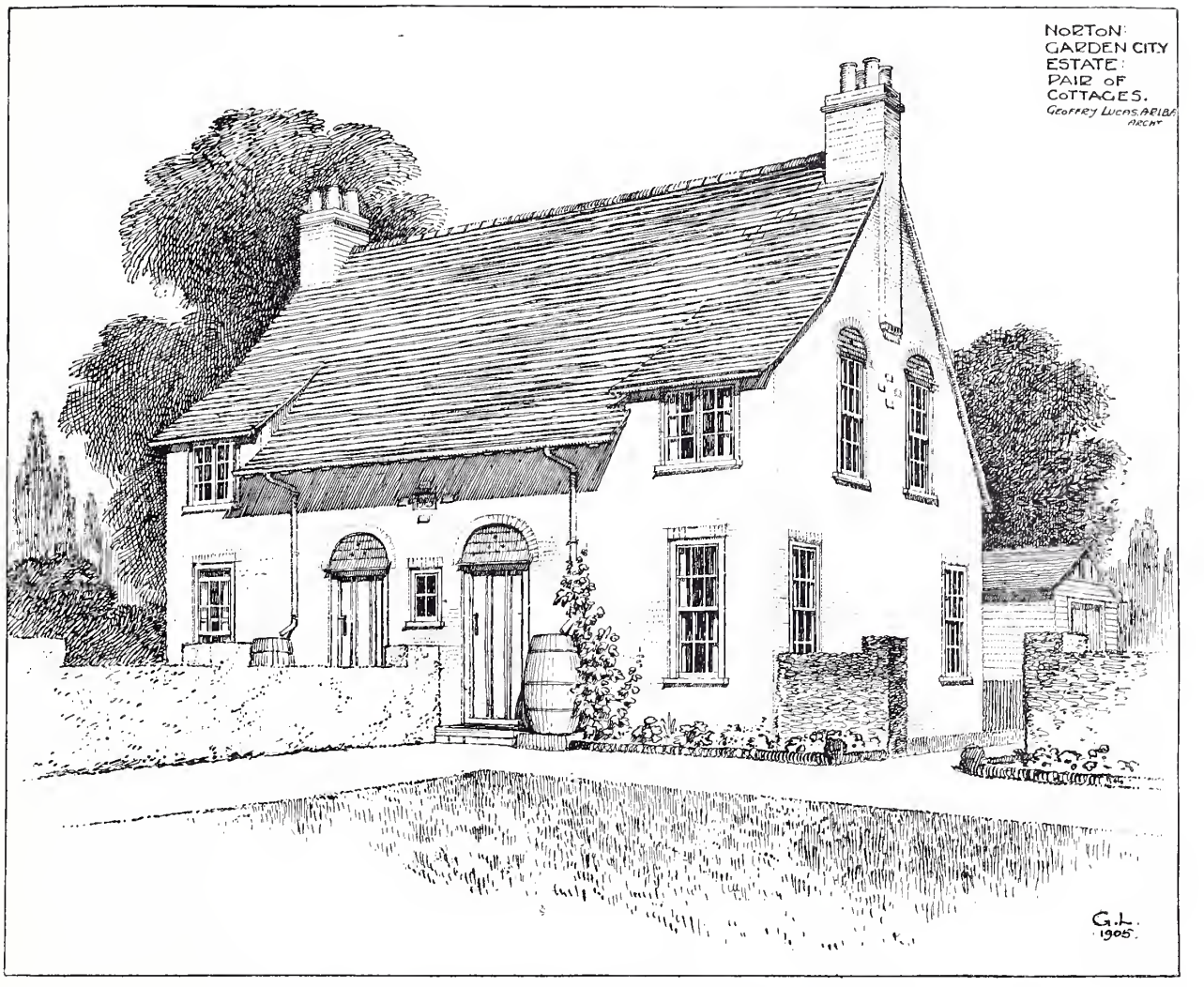
In addition, each cottage has a barn building 10 ft. by 7 ft., in which to keep garden utensils, etc.

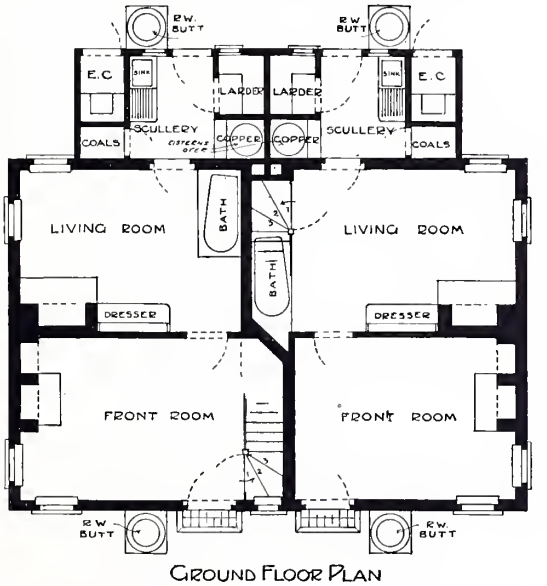
The cottages constitute a small holding, standing on four or five acres of land.

The design has been kept very simple. Sash windows were desired, and, upstairs, in order to get the height necessary for the windows, they were placed at the sides of the building. The position of the windows has been governed by the desire to obtain as much sun as possible, and to command the garden ground adjoining. The materials used are white Arlesley bricks, red plain-tiled roof, white windows, and green doors, and rain-water butts.

The back buildings and barns are of Stockholm-tarred weather-boarding.

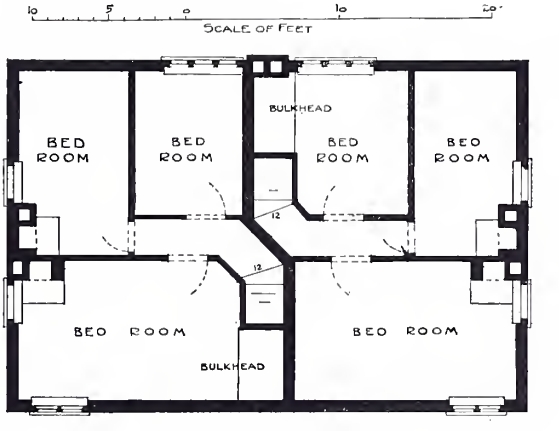
The contract price, including £10 contingencies, the barn buildings, drainage and cesspool, and carriage of materials was £400, which has not been exceeded. Messrs. Raban & Sons, of Baldock, Herts, were the contractors, and Mr. Geoffry Lucas, of 16, Hart Street, Bloomsbury Square, W.C., and Hitchin, Herts, was the architect. The cost per foot cube was $5\frac{1}{4}d.$, and the cottages are entered for Class 4 of the competition.




GROUND FLOOR PLAN

NORTON
GARDEN CITY ESTATE
PAIR OF COTTAGES




FIRST FLOOR PLAN

Cost per foot cube, $5\frac{1}{4}d.$

[*Geoffry Lucas, A.R.I.B.A., Architect, 16, Hart Street, Bloomsbury, and Hitchin.*

## COTTAGE DESIGNED BY MR. ALLEN FOXLEY, B.A., ARCHITECT.

Exhibit consists of detached cottage, estimated cost £200, without builder's profit; this works out at 4·34*d.* per cubic foot. By slight rearrangement of plan, could be built in pairs at reduction of about 2½ per cent.

Accommodation, with sizes of rooms, as follows:—Ground floor:—Living room, with range, 13 ft. 1½ in. by 11 ft. 6 in. by 7 ft. 10 in. high; scullery (with copper and bath heated by copper), 10 ft. by 6 ft. 4½ in. (average) by 7 ft. 10 in.; store, 5 ft. 6 in. by 3 ft. by 7 ft. 6 in.; parlour, 10 ft. 3 in. by 9 ft. 9 in. by 7 ft. 10 in.; cupboard under stairs, area 22 sq. ft.; w.c. and coal shed. First floor: bedroom I., 13 ft. 1½ in. by 11 ft. 6 in. by 7 ft. 9 in. high: bedroom II., 13 ft. 6 in. by 10 ft. 3 in. by 7 ft. 9 in. (each of these reduced by entrance lobby about 3 ft. 6 in. square); bedroom III., 11 ft. 6 in. by 6 ft. 4½ in. by 7 ft. 9 in. (this room has no fireplace). Cupboards in living room and bedroom I.

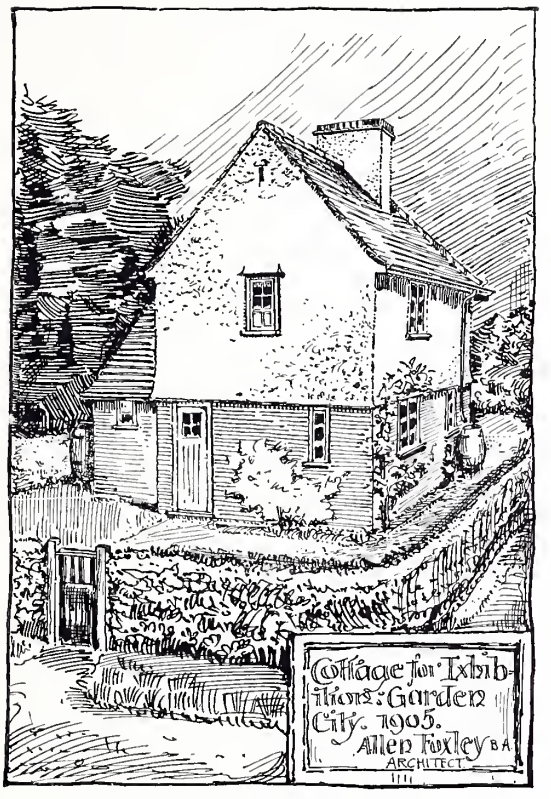
Materials.—Brick walls on ground floor, faced with red bricks from Bourne, Lincolnshire; above, cement rough-cast; red tile roof. Floors:—ground floor (except parlour), 6 in. square red paving tiles; parlour and first floor, 1 in. boarding on joists; plaster ceilings. Rain water collected in butts; gas stove in scullery; external walls, 9 in., internal, 4½ in.

The cottage is commissioned by Miss Barbara Foxley, of Queen Mary's High School, Walsall, for whom Mr. Allen Foxley is acting as architect.

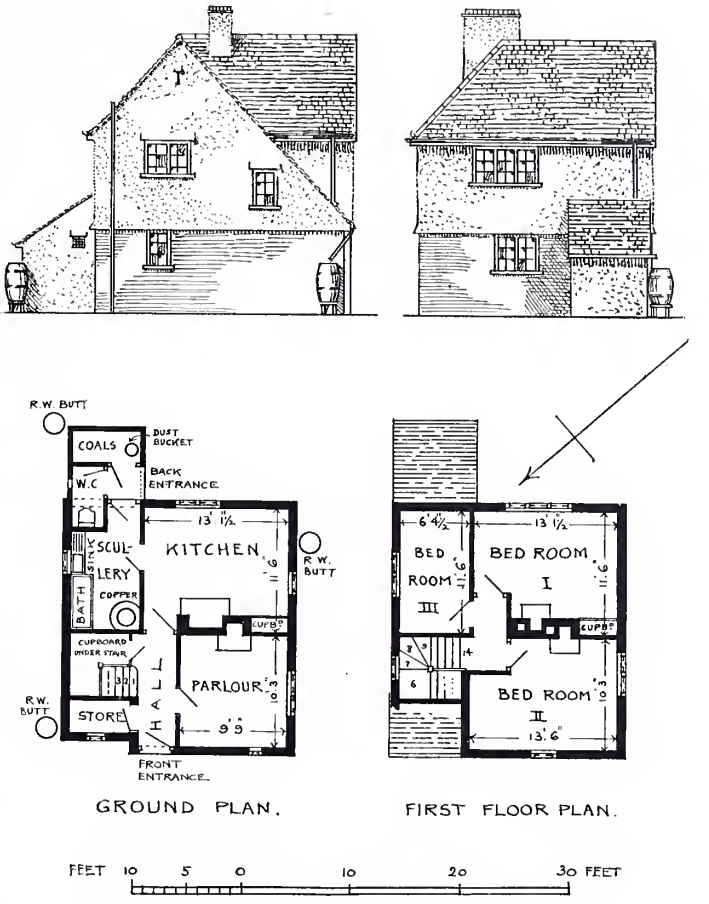
The cost per foot cube is estimated at 4·36*d.*, or 4·8*d.* with 10 per cent. added for profit.

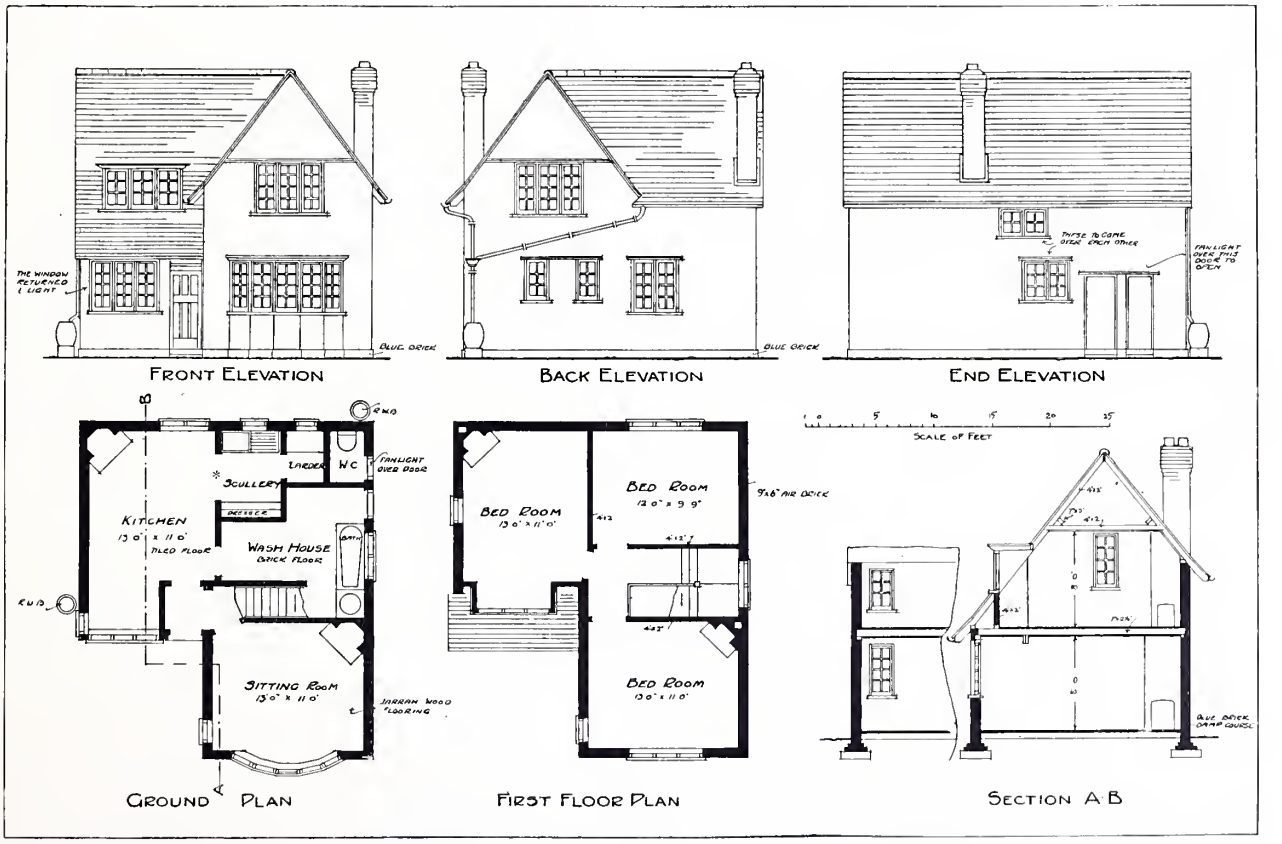
## COTTAGES ERECTED BY MESSRS. PICTON AND HOPE, CONTRACTORS.

The plan of cottage is entered in Class I., viz., £150 detached cottage, plus profit, architect's fees, and extra cartage to site. The chief feature is to get as much space as possible in each room for the amount mentioned, and thus to avoid wasteful passages. Brickwork and ornamental steel give what they consider the average working man should have. The accommodation provided is:—Sitting-room, 13 ft. by 11 ft., with circular window; large kitchen, 19 ft. by 11 ft.; scullery, bath-room, and three excellent bedrooms; two of the latter have fireplaces. It is also fitted with Ellkay and Cornes' combined range, copper and folding bath. A cupboard of matchboarding is formed in the scullery, and, when not in use, the bath, being counterbalanced, is easily lifted up into the cupboard. The waste pipe from the bath is made of the best flexible hose, which, being a permanent connection, moves with the bath outlet in the lifting operation.




Cost per foot cube, 4·36*d.* net.




Cost per foot cube, $3\frac{3}{4}$*d.* without profit.

[*Picton and Hope, Hitchin, Herts.*

* The scullery portion of this plan has been slightly re-arranged to suit the "Model Cottager" combination range, copper, and folding bath.

## COTTAGES DESIGNED AND ERECTED BY MESSRS. POTTER & CO., LIMITED.

### Single Cottage.

The walls are of monolithic concrete 7 in. in thickness, made of one part Portland cement and seven parts locomotive ashes from the G. N. Ry. Externally rough-cast, except plinth, which is faced with Portland cement trowelled smooth.

The floors throughout are composed of rough-core from ashes, 5 in. in thickness; cement concrete as walls, but one to five, 4 in. in thickness on same, and granitic cement 1 in. trowelled to smooth surface to scullery, larder, dry cupboard and porch. All other floors, inch deal nailed direct to the concrete.

Roof, ordinary construction, covered with the "Somerset" patent interlocking tile. Inside partitions cement concrete, 3 in. in thickness.

Ceilings lathed with steel lathing. The walls and partitions are not plastered in the ordinary way, but the smallest amount of cement is applied, and this is trowelled off to the surface of the concrete, no rules, straight edges, etc., being used.

The object is to produce a hard, smooth, undamageable surface with the least amount of labour and materials. In practice this is found to be a desirable system for rural cottages.

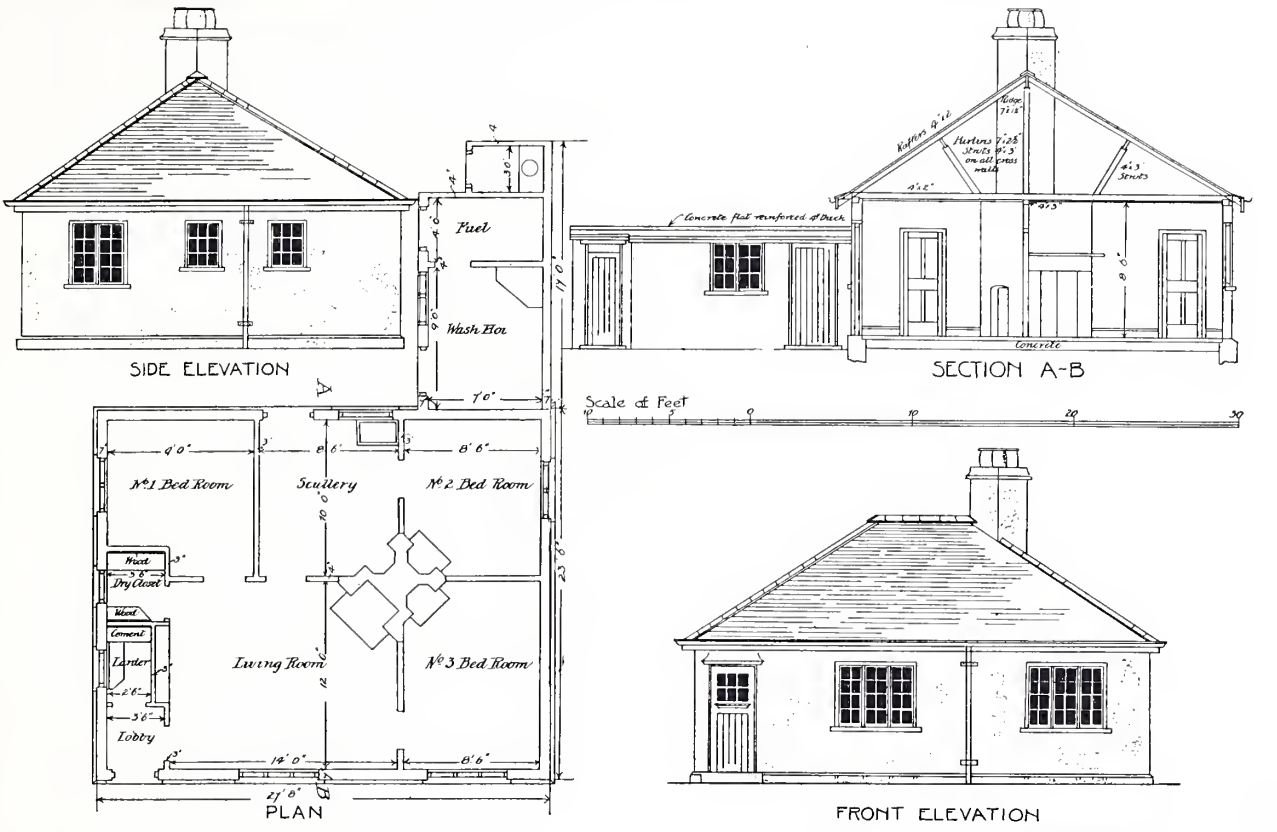
The skirtings are cement 4 in. deep. Windows and doors of the usual cottage type. Stoneware sink, ordinary range for living room with wrought-iron oven, and no boiler. Rustless washing boiler in wash-house. Granitic door sills and hearths.

### Double Cottage.

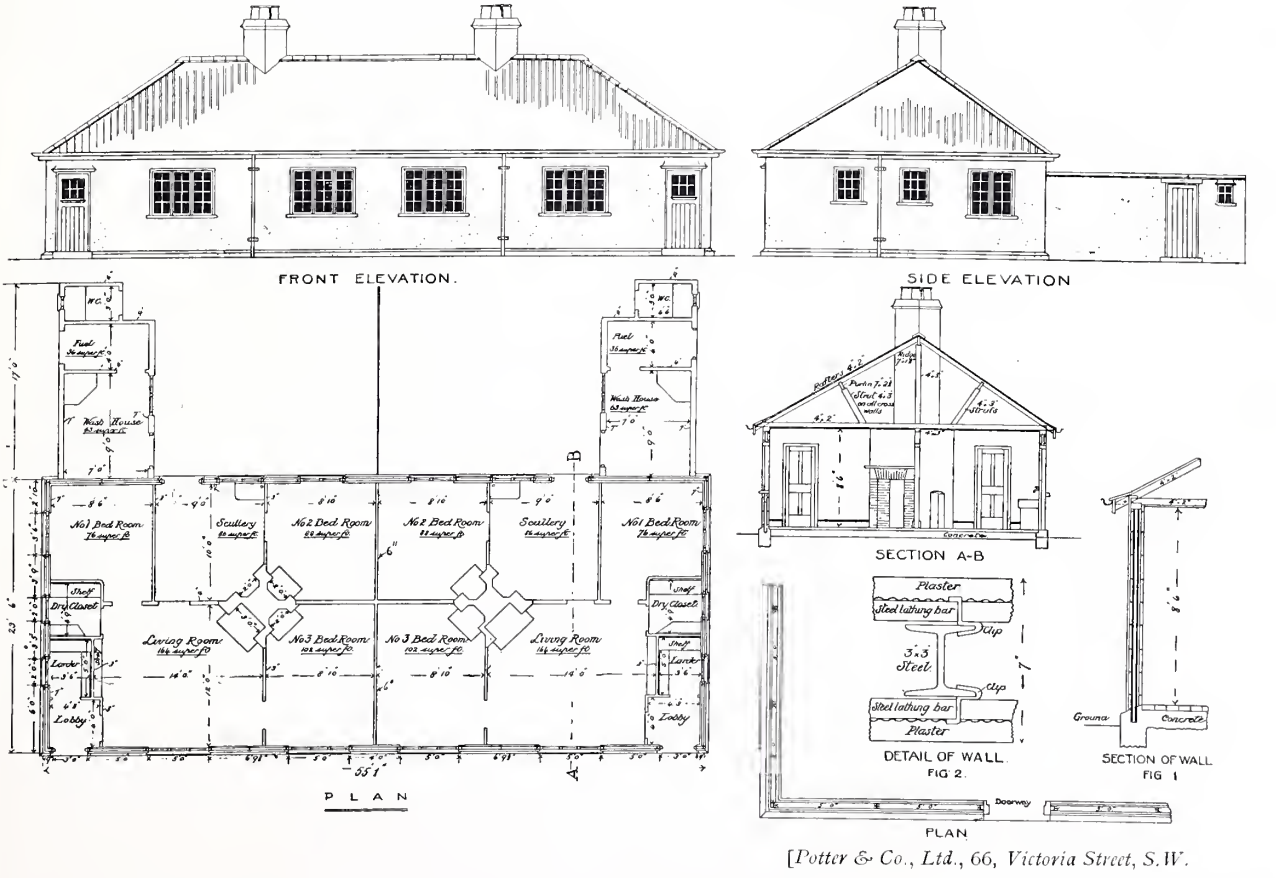
The external walls are constructed as follows:—

Cement concrete foundations and plinth as shown by plan. Rolled iron 3 in. by 3 in., tee stanchions; the ends embedded in the concrete are fixed about 5 ft. apart. Angle cleats are rivetted on top, to fasten the wood wall plate thereto. The window and door frames are fixed between the standards. Lathing bars $\frac{3}{4}$ in. by $\frac{1}{4}$ in. are fastened horizontally and 12 in. apart to the standards, both inside and outside, by means of a very simple clip, and steel lathing is wired thereto ready for plastering. Outside is rough-cast plaster, inside ordinary plaster work. The object is lightness—one-tenth the weight of an ordinary 9 in. brick wall—dryness (no damp can pass through), durability (there is nothing to decay), strength unlimited, fire-proof, vermin-proof. The cost is about the same as an ordinary 9 in. brick wall. Adapted more especially where the ground is not the most solid, cartage of bricks costly, sites inaccessible, used only occasionally for shooting boxes and similar places.

In all other respects the construction is the same as for single cottage adjoining.

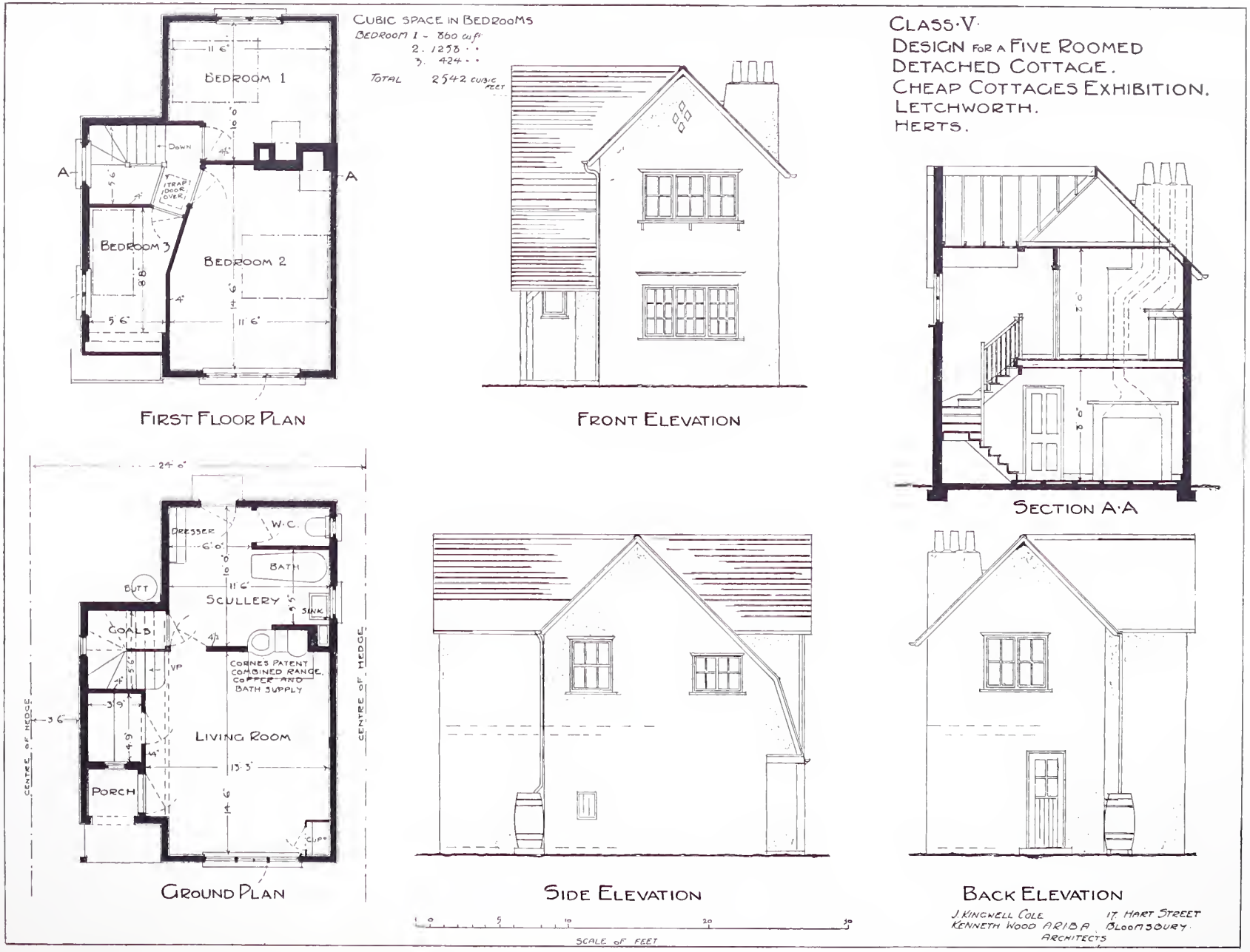



[Potter & Co., Ltd., 66, Victoria Street, S.W.

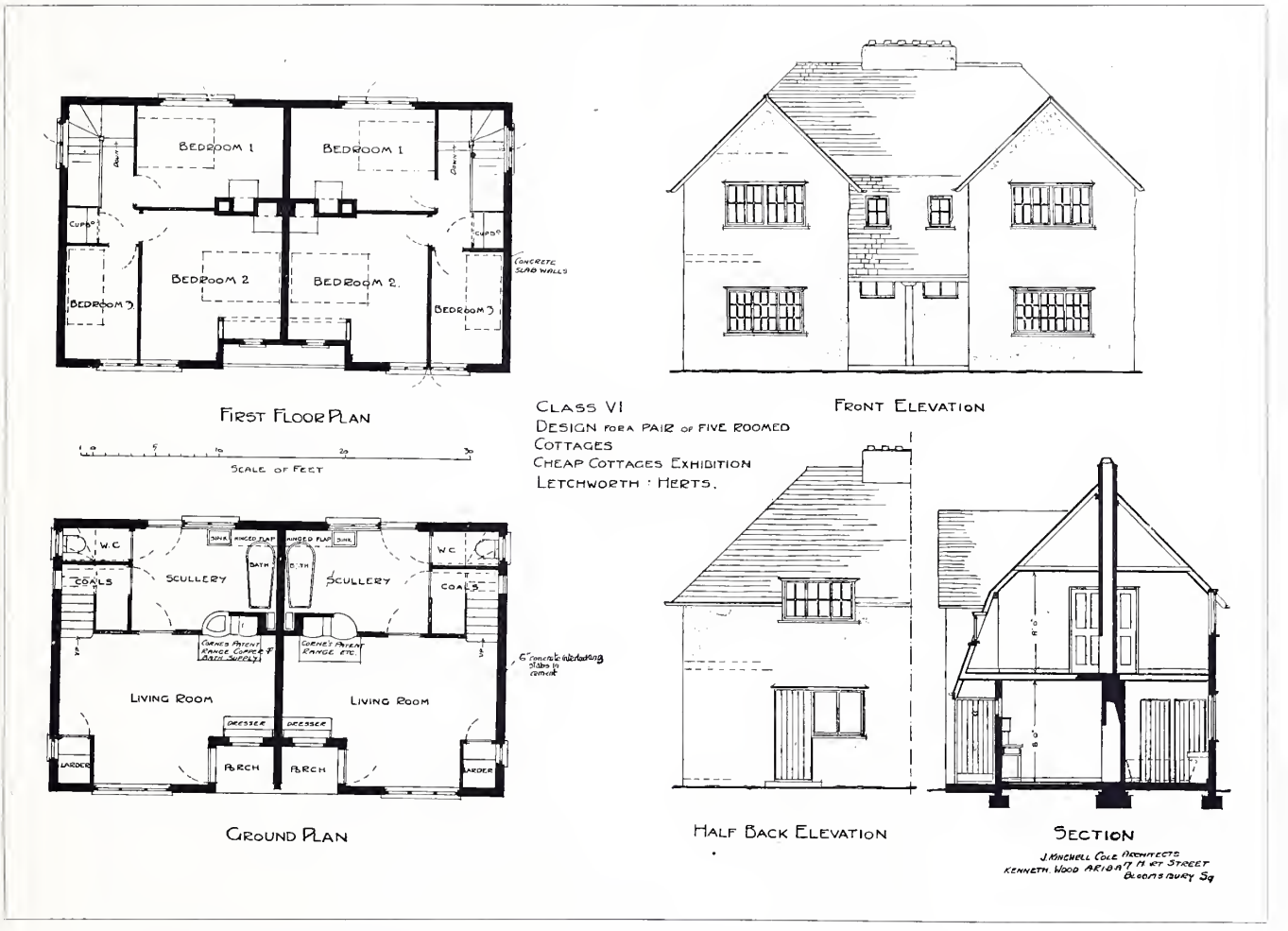



[Potter & Co., Ltd., 66, Victoria Street, S.W.

Approximate cost per foot cube, 5*d*. for both cottages.




Cost per foot cube, 4½*d.* to 5*d.*




Cost per foot cube, $4\frac{1}{2}d.$ to $5d.$

## DESIGNS FOR SINGLE AND DOUBLE COTTAGES BY MESSRS. J. KINGWELL COLE AND KENNETH WOOD, A.R.I.B.A., ARCHITECTS.

The detached cottage and a pair of semi-detached cottages proposed to be erected at the Garden City will be constructed of coke breeze, concrete slabs fastened to concrete posts, etc., rough cast on the exterior, and "Calmont" asbestic plaster sheets on the interior; this will considerably lessen the danger of fire. Wood casement windows painted green; red tiled roofs.

The detached cottage comprises living room, scullery (in which is fixed a bath with hot and cold supply), larder, coals, and w.c.; three bedrooms on the first floor. In the living room will be fixed a "Cornes" patent range and copper combined, which supplies the sink and folding bath with hot water.

The pair of cottages will be erected for competition by Messrs. B. Ward & Co., 38, Parliament Street, Westminster.

The estimated cost is about £148 per house.

## COTTAGE DESIGNED BY MR. R. WHITBREAD, M.S.A., A.R.S.I., ARCHITECT.

### PLOT 485. CLASS 5. DETACHED £150 COTTAGE.

The grouping of the rooms, including bathroom and larder, round what may be called a hall is one of the chief features of this house. No room can be used as a passage from one part of the house to another. There is no back door proper, and the scullery benefits both in convenience and comfort by its absence. The hall contains stairs, with store under, both well lighted. They can be got at from either apartment without having to pass through a room. The entrance door is given a south-west aspect, to escape the cold winds from north and east. It has a shelter (provided with a seat) formed by the continuation of the out office roof. An entrance thus placed not only conduces to comfort, but can be made to meet all the requirements of a labourer's cottage. The coal place and w.c. are placed near the door, but no privacy or convenience is thereby sacrificed. The bedrooms (three) are grouped round a well-lighted landing. The largest one contains 1,000 cubic feet, large enough for two adults. The other two have floor space for double beds. Each room has at least two positions suitable for the bed. Two have fireplaces. Every place is well lighted, and the disposition of the windows secures sunny rooms.

The walls are built of Nottinghamshire bricks; the outer face of the upper story is dashed with cement and gravel.

The roofs are covered with a well-shaped, hard burnt, red "Vasco" tile. The partitions between bedrooms are cored with McNeill's slag wool to act as sound deadener. The ground floors are of "Excelsior" cement tiles and slate dots 1 in. thick, laid on a bed of asphalte, thus forming a perfect damp resister.

The bathroom is on the ground floor, to allow of hot water being drawn from the scullery copper.

The store and landing windows are "York" lights. The difficulty attending the outside cleaning of these lights has been overcome by the use of hinges specially designed for this purpose by the competitor. The remaining windows have sliding sashes.

The structure, drainage, water supply, etc., are arranged so as to conform to the usual bye-laws of the urban and rural districts of England.

Net cost, exclusive of builder's profit and architect's fees, £150.

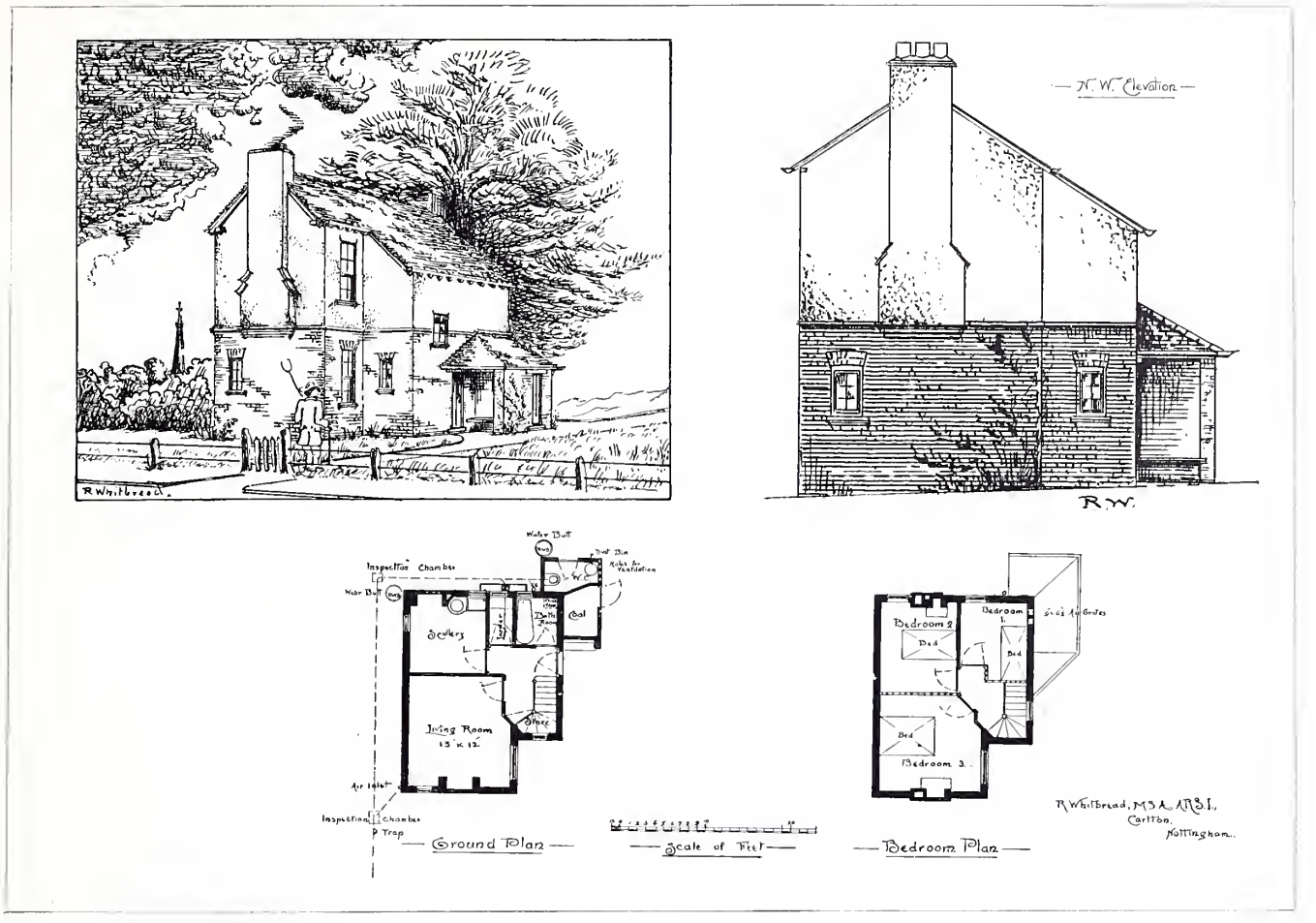
## PROPOSED COTTAGE TO BE ERECTED ON PLOT NO. 478, DESIGNED BY MESSRS. HARRISON AND HATTRELL, ARCHITECTS AND SURVEYORS.

Simplicity, comfort and durability have been aimed at throughout in the construction and the fittings.

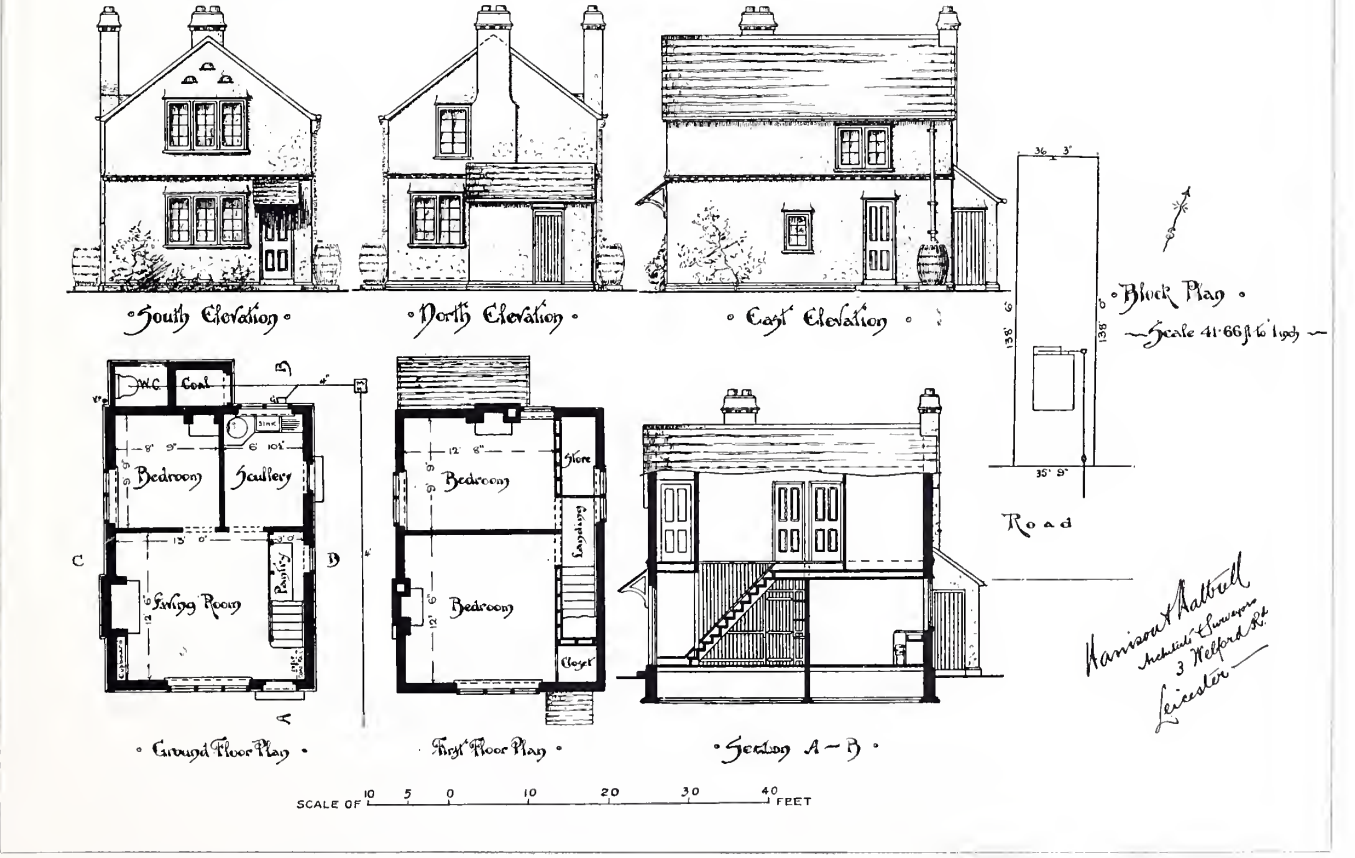
The plan is commodious and compact, and the spare room on the ground floor may be used as a parlour or bedroom, according to family requirements.

Further particulars as to appearance, accommodation, comfort, etc., may be gathered from the plans. It has been afterwards proposed by the architects to include a bath among the fittings, and certain modifications have been made in the plan during execution.

The builders are Messrs. Tyers and Yates, of Leicester.




Cost per foot cube, 4*d*.




Cost per foot cube, $4\frac{1}{4}d$.

## PAIR OF COTTAGES FOR THE ASBESTIC BRICK AND TILE COMPANY.

### PLOT 543. CLASS 4.

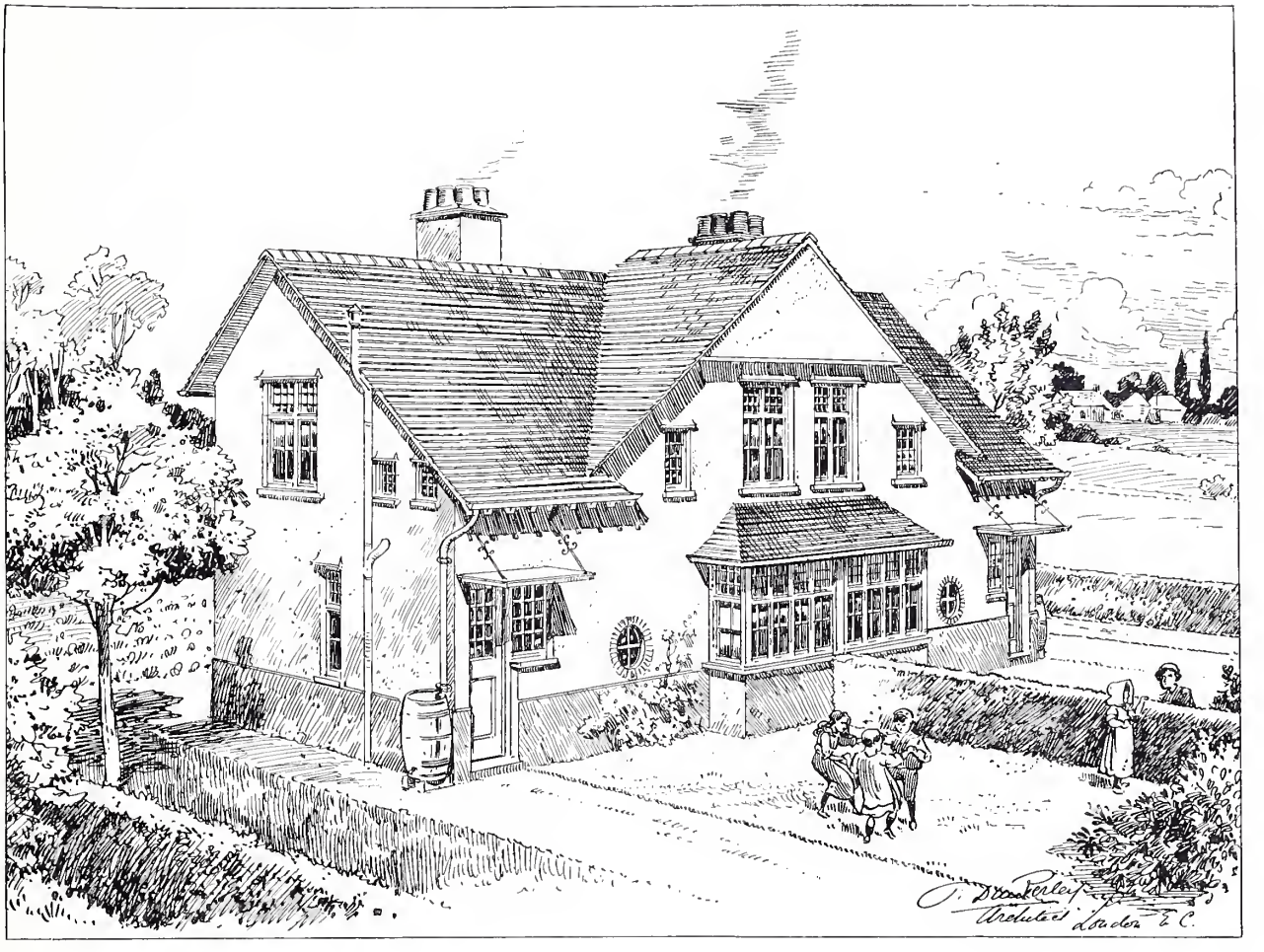
The living room contains a range having a combined oven, fire and copper, the latter provided with a constant and regular supply of water from a small feed cistern—the copper is not noticeable from the living room, but is used from the scullery behind; this copper on wash days can be separately heated if required, but from experience it has been found that an ordinary kitchen fire is sufficient to keep the water at a suitable temperature for bathing purposes. The copper provides hot water to a full-sized bath in the scullery, this portion of the scullery being so arranged that folding doors, when closed, screen the bath and form a room with a separate window, which can be used as a bathroom without in any way interfering with the ordinary work of the house. When the bathroom is not in use, the doors are folded against the wall and the space added to the scullery. This combination is supplied by Ellkay & Cornes, Ltd., London.

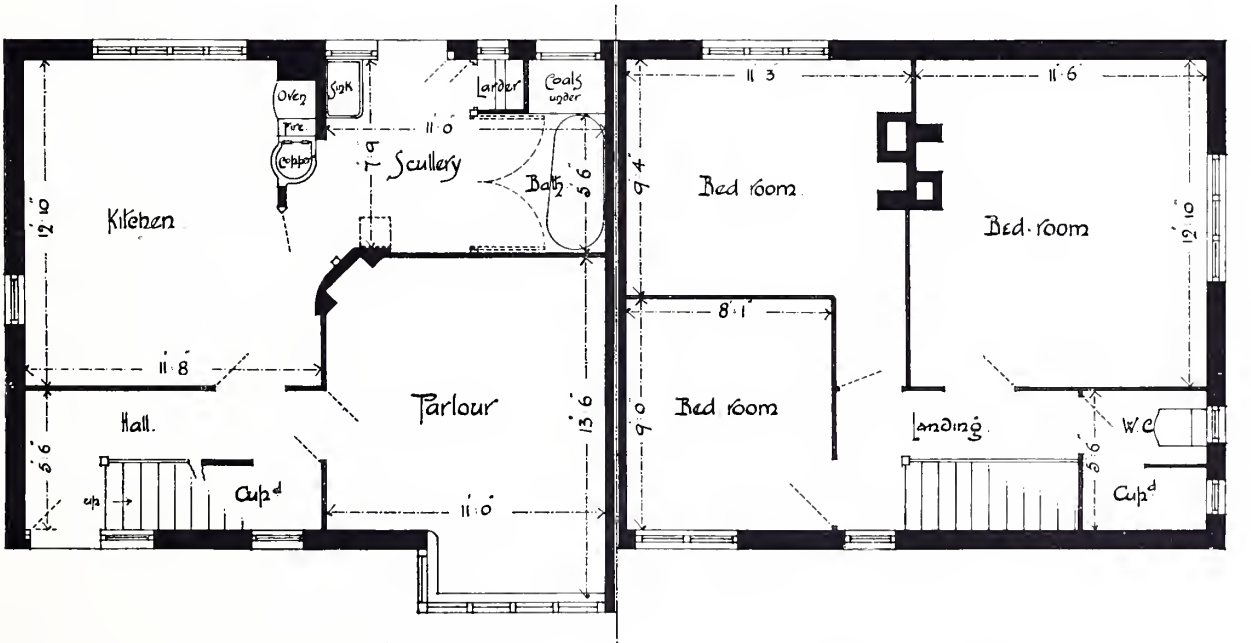
All the rooms are of exceptional size and unusually well lighted.

The w.c. is placed on the first floor, this being considered desirable in a house of this description.

The elevations have been designed to show the adaptability and suitability of the Asbestic brick. This brick is machine-made under hydraulic pressure, and is composed of lime, sand and Asbestic, the latter making it a non-conductor of heat and sound, the finished product being a perfectly modelled brick, having fine arrises and an even colour. It is made in all colours, light and dark red, light and dark grey, biscuit, white, etc., etc. This brick has favourably withstood tests to which it has been put by Messrs. Kirkcaldy.

The cost is £168 per house, excluding builder's profit, "model cottager" bath, etc. If these items are included, the total cost is £200 per cottage, these amounts being equal to £28 and £33 6*s*. 8*d*. per room respectively. The architect is Mr. V. Dunkerley, of No. 8, Frederick's Place, Old Jewry, London, E.C.




. Ground Floor Plan . . First Floor Plan .

Cost per foot cube, $4\frac{1}{2}d$.

[*V. Dunkerley, Architect*

# HOUSES WITH DOUBLE WALLS, ERECTED BY THE FIREPROOF PARTITION AND SPANDREL WALL COMPANY.

## Larger House.

The house is built with the company's patent spandrel walls, namely two brick-on-edge walls in cement mortar and reinforced with hoop irons. the two walls being 8 in. apart so as to form a hollow wall. The loads of floors and roofs are carried on iron girders supported on iron stanchions placed within the hollow wall. As the walls are self-supporting between these stanchions there is practically no foundation required except just under the above-mentioned stanchions, the whole of the external walls as well as internal partitions being constructed in the patent system in cement. The structure is guaranteed crackproof and free from settlements of every kind.

The whole of the external walls are rough cast in cement mortar.

The house has on the ground floor a hall, large sitting room with cupboards, formed by the hollow walls, kitchen with larder and scullery.

The w.c. is placed on and approached from the landing. The space under w.c. and landing is used as a coal-cellar, approached from the outside.

On the first floor there are two large bedrooms with cupboards to each, and a smaller room suitable for a child's bedroom or a boxroom.

The staircase is continued to the attic floor where it is enclosed. Two convenient and cheerful bedrooms and storeroom can be easily arranged on the attic floor if desired.

The company is prepared to erect these houses, including drainage, water supply and fencing complete for the sum of £265. If several houses of the same pattern are built at the same time, the cost will be £250 each.

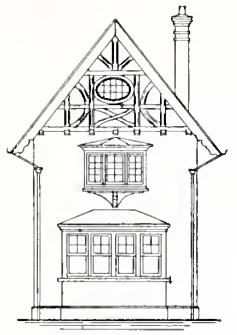
## Smaller House.

The house is constructed with the company's patent spandrel walls in brick, iron and cement, the walls being self-supporting between the carrying stanchions; no foundation is required, except that in pier holes under stanchions. Internally, battens are placed against the walls 18 in. apart, covered with compo board resting on a layer of inodorous roofing felt. This latter, together with the air space formed between the battens and the rough-cast outside, ensures a perfectly dry wall, and the whole gives a hollow wall of a cheap and perfect description. The house is approached by a porch with seat, a lobby giving access to living room, bedroom, kitchen, and w.c. There are three large bedrooms well ventilated and fitted with cupboards. The larder is approached from the scullery, and a coal-cellar under same approached from the outside and also from scullery.

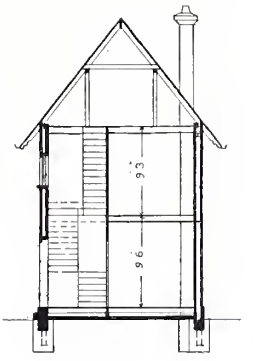
The whole being on one level forms an exceedingly convenient and cheerful cottage, perfectly dry on account of the hollow spaces within the walls.

The company are prepared to erect a house of this pattern, including drainage, water supply, etc., complete for the sum of £160. If several houses are erected at the same time, the cost will be £150 each.

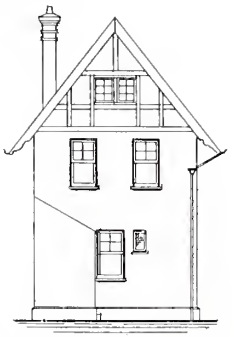
The Fireproof Partition and Spandrel Wall Co., Bank Chambers, 92, Tooley Street, London Bridge, S.E.



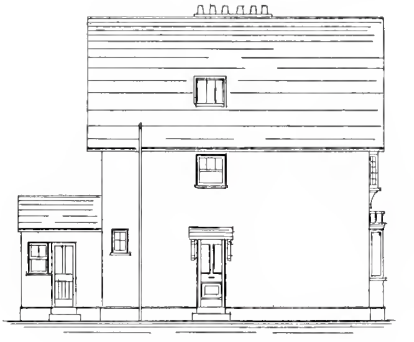
FRONT ELEVATION



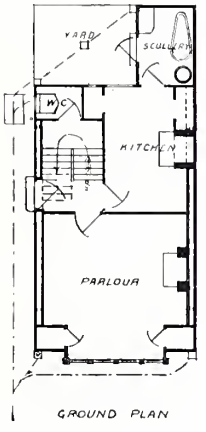

SECTION



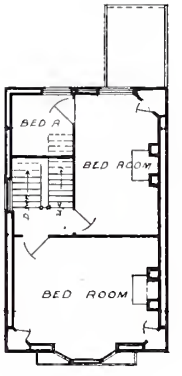
BACK ELEVATION



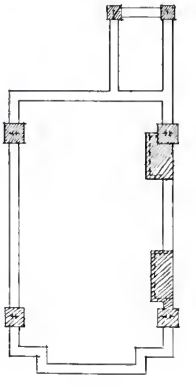
SIDE ELEVATION




GROUND PLAN




FIRST FLOOR PLAN

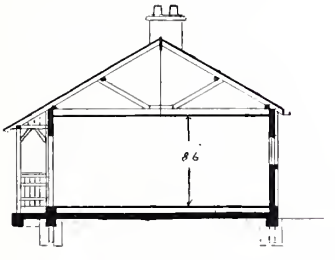


PLAN OF FOUNDATIONS

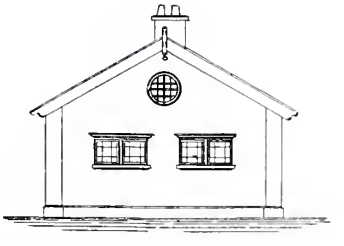
PROPOSED COTTAGE
GARDEN CITY HERTS

THE FIREPROOF PARTITION & SPANDREL WALL C°
BANK CHAMBERS 92 TOOLEY STREET
LONDON BRIDGE S.E.

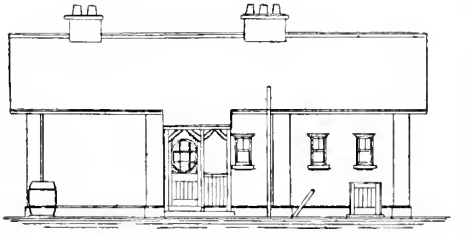
Cost per foot cube, $5\frac{1}{4}d.$



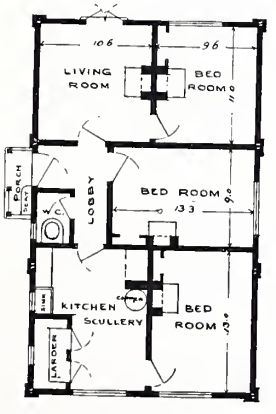

SECTION



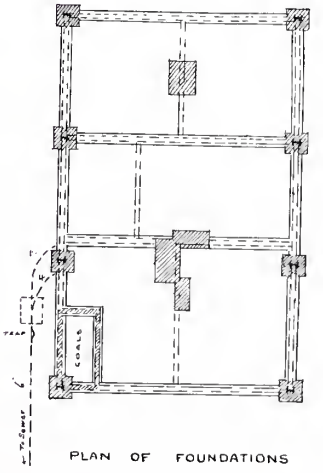
FRONT & BACK ELEVATIONS



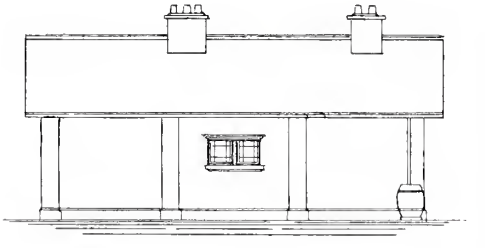
EAST ELEVATION




GROUND FLOOR PLAN



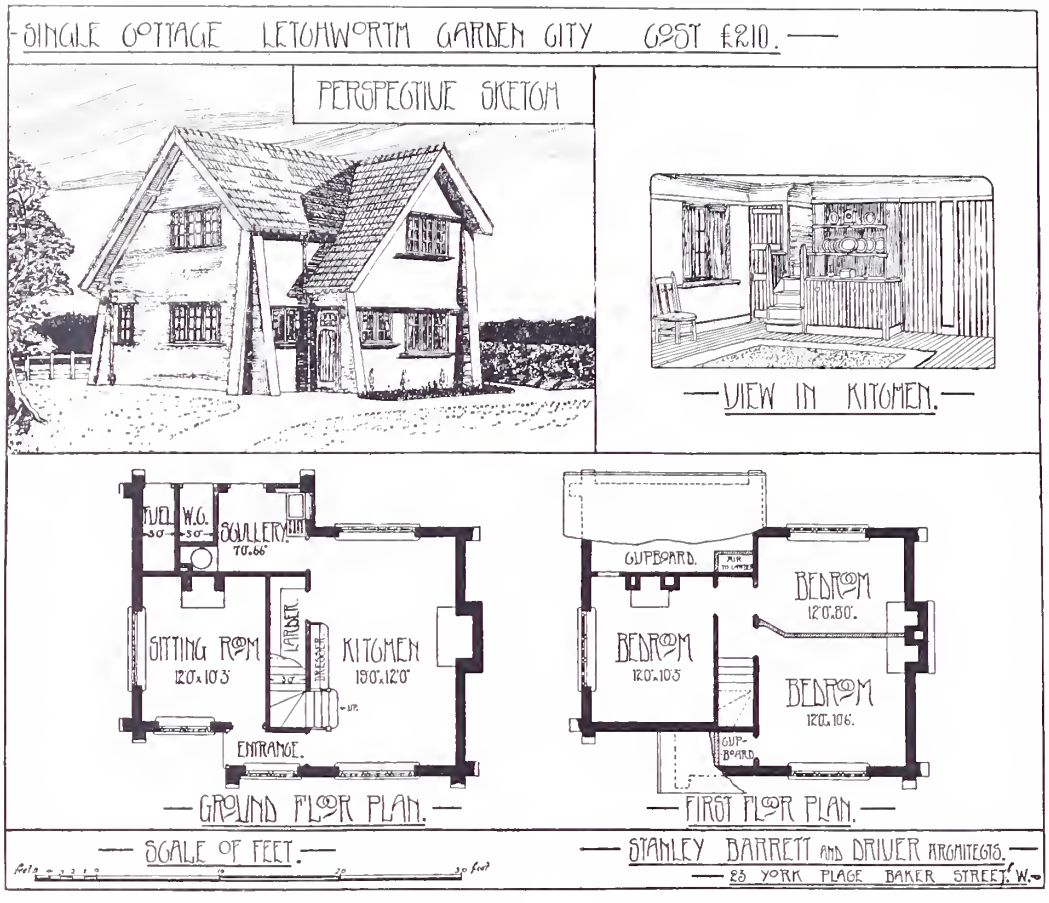

PLAN OF FOUNDATIONS



WEST ELEVATION

THE FIREPROOF PARTITION
& SPANDREL WALL Co
BANK CHAMBERS
92 TOOLEY STREET
LONDON BRIDGE S.E.

Cost per foot cube, $4\frac{1}{4}d.$




Cost per foot cube, $4\frac{1}{4}d.$

## DETACHED COTTAGE COSTING £210, FOR CLASS 4, DESIGNED BY MESSRS. STANLEY BARRETT AND DRIVER, ARCHITECTS, 23, YORK PLACE, BAKER STREET, W.

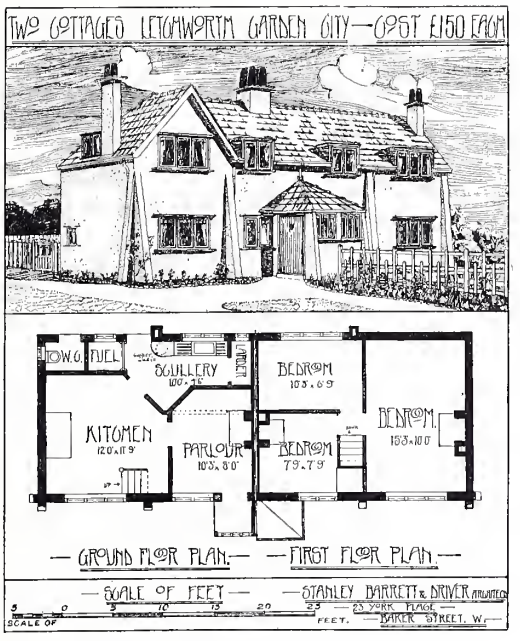
This cottage, to cost £210, was designed for a somewhat superior tenant, and would make a very nice week-end country or seaside cottage. The construction and decoration are similar to the £150 cottage.

Entering the front door, which is sheltered from direct driving rains, you find a door on your left which opens into a pleasant sunny sitting-room, 12 ft. long by 10 ft. 3 in. wide. Another door opens from the entrance lobby, which leads into the kitchen. This kitchen is intended to be used as a sitting-room also, and is accordingly made the best room in the house. It is nearly 20 ft. long.

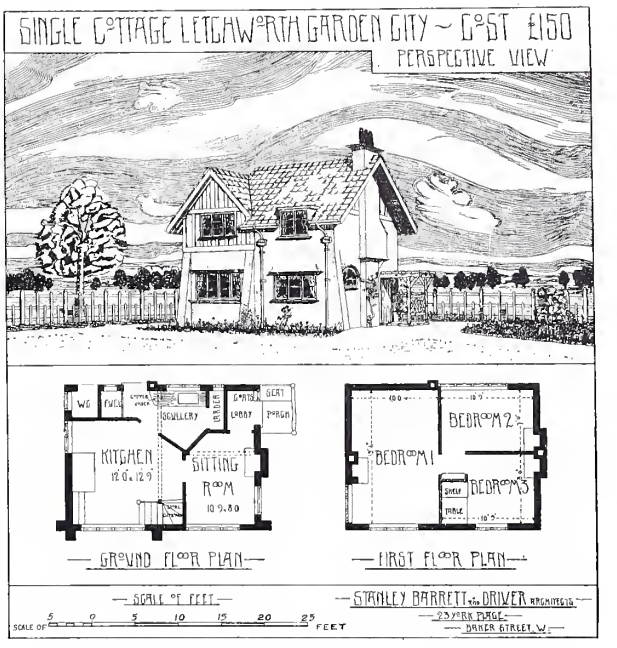
Upstairs is a large bedroom, 12 ft. long by 10 ft. 3 in. wide, with a large three-light window opposite the door.

A fold-up bath could be put in this room next the fireplace, and by taking off a small portion of the cupboard could be made to fold up in a cupboard to itself, so that, when not in use, it would not be seen. This bath supplied with hot and cold water service would cost about £10 extra, or, if the box-room was made higher and turned into a bath-room, the extra cost would be about £25. There is also room for another small bedroom, which would add another £15 to the cost, so that for £250 a house could be built with kitchen, sitting-room, four bedrooms, and a bathroom.

The two other bedrooms are 12 ft. by 8 ft. and 12 ft. by 10 ft. 6 in. respectively. The latter has a cupboard. All the bedrooms have fireplaces.




Cost per foot cube, $4\frac{1}{4}d.$




Cost per foot cube, $4\frac{1}{4}d.$

## DETACHED COTTAGE COSTING £150, FOR CLASS I.

The plan of this cottage was designed by Messrs. Stanley Barrett and Driver originally for a large estate at Toddington, near Winchcombe, Gloucester, and a pair have been built there. It is proposed to erect others. The cost at Toddington came to £153 per cottage, but this was due to the high price of materials locally.

The kitchen is a good-sized room, over 12 ft. square, and the stairs lead directly out of and are left open to it, which adds cubical contents to the room, makes the stairs much lighter, and, therefore, more likely to be kept clean.

The best bedroom is one of the features of the cottage. It is 15 ft. 6 in. long and 10 ft. wide, and contains over 1,250 cubic ft. of air space. There are two other bedrooms.

It will be noticed that there is no bath in this cottage, but this could be added in one of the bedrooms at the small extra cost of £7 to £8, including hot and cold water supply, the bath being made to fold up against the wall when not in use. As, however, it is a condition of the competition that the cottage shall not exceed £150 in cost, it has been found impossible to include this.

The walls are all built of brick, treated externally with a coat of 1 in. of Portland cement, and, while this is wet, small stones mixed with lime are thrown on. This treatment makes the rooms much warmer in winter and cooler in summer, and keeps the walls quite watertight and dry.

The roof is covered with patent tiles of a rich red colour. These tiles are about an inch thick, and thus keep the bedrooms at an even temperature in winter and summer, while with the thin slates often used, the bedrooms are ice-wells in winter and ovens in summer.

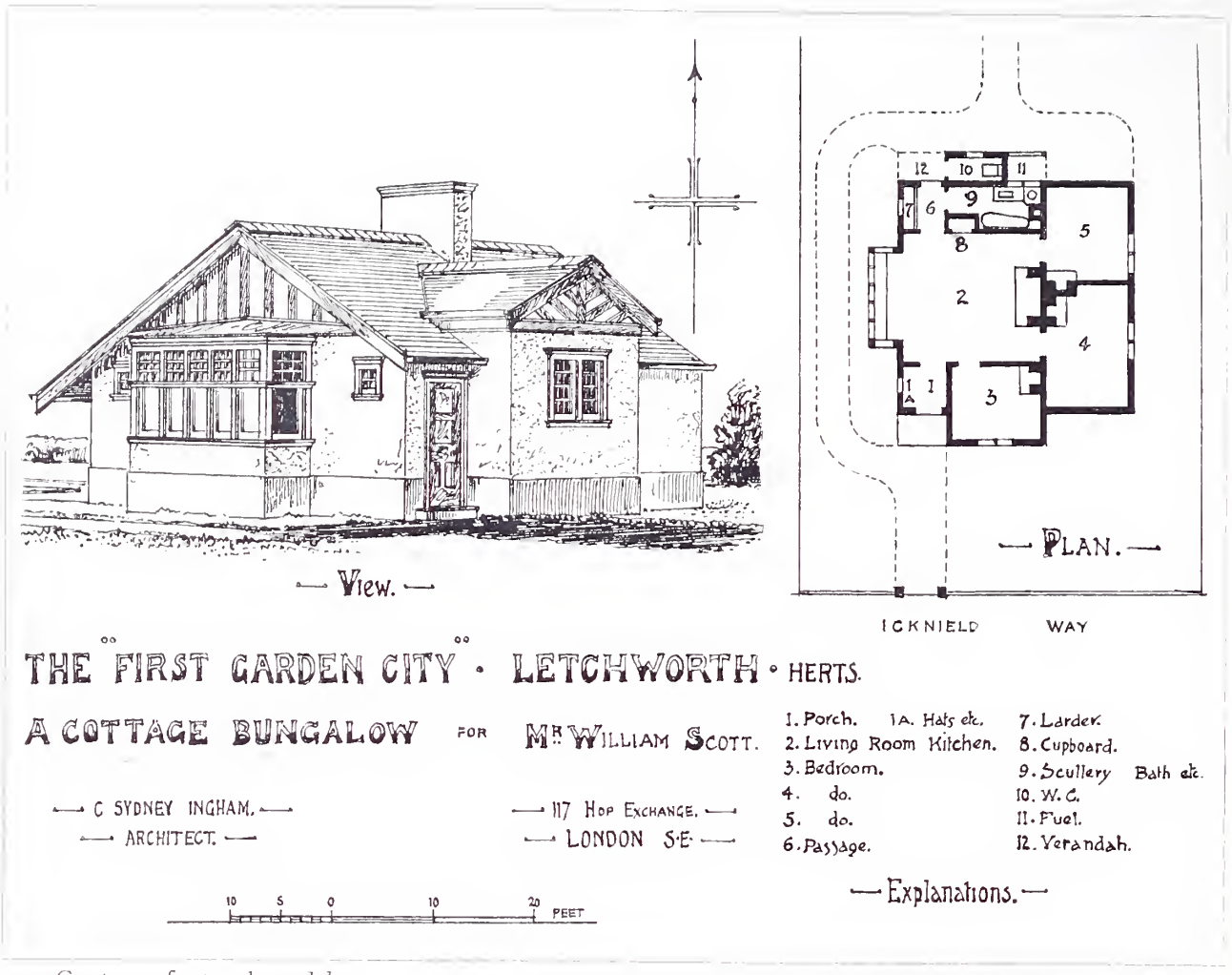
The chimney pots and overhanging tiles are stained black, and look exceedingly well, while the smoke never affects their appearance.

The aim of the architects, Messrs. Stanley Barrett and Driver, has been to get an ideal cottage for £150, or, fitted with a bath with hot and cold water, for £160.

## PAIR OF COTTAGES COSTING £300, CLASS II.

These cottages are very similar in plan, construction, and decoration to the £150 single cottage designed by the same architects. Where, however, materials are expensive, these cottages would be more likely to be erected at the price than the single cottage.

If preferred, rustic porches with seats could be substituted for the enclosed porches, and, in the architects' opinion, these would be better. On the other hand, should these cottages be built in a very exposed position, the closed-in porch tends to make the sitting-room more comfortable.


— View. —
— Plan. —
ICKNIELD WAY
THE FIRST GARDEN CITY · LETCHWORTH · HERTS.
A COTTAGE BUNGALOW FOR MR WILLIAM SCOTT.
— C SYDNEY INGHAM. —
— ARCHITECT. —
— 117 HOP EXCHANGE. —
— LONDON S.E. —
1. Porch. 1A. Hats etc. 7. Larder.
2. Living Room Kitchen. 8. Cupboard.
3. Bedroom. 9. Scullery Bath etc.
4. do. 10. W.C.
5. do. 11. Fuel.
6. Passage. 12. Verandah.
— Explanations. —
10 5 0 10 20 FEET

Cost per foot cube, $4\frac{1}{2}d.$

## COTTAGE DESIGNED FOR MR. WILLIAM SCOTT.

The drawings relate to a cottage which can be erected at a cost not exceeding £150.

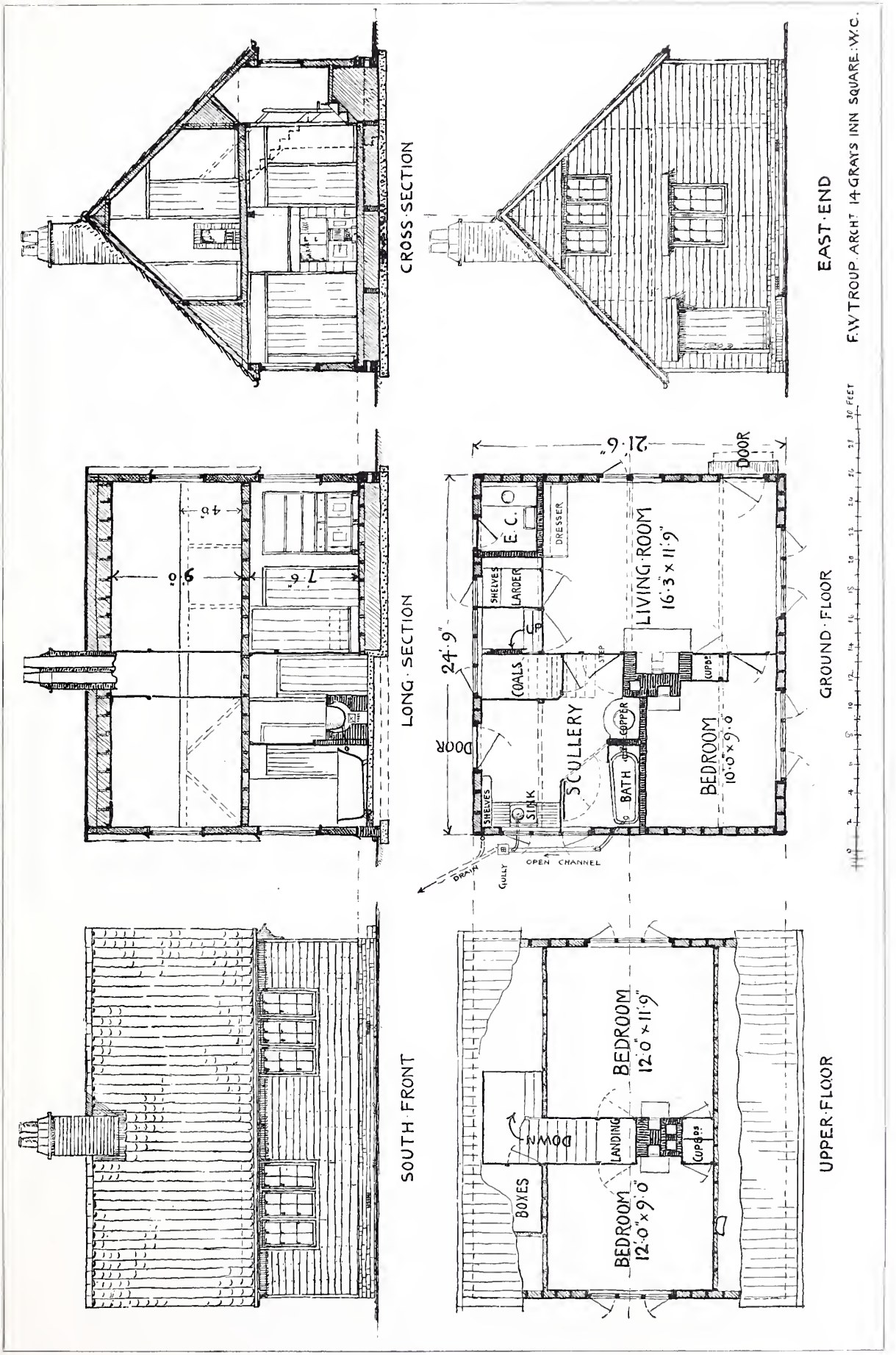
The special features in connection with this system of construction, are absolute immunity from fire, damp, sound and vermin. The materials used consist of steel, wire and concrete.

## COTTAGE DESIGNED BY MR. F. W. TROUP, ARCHITECT.

This cottage is planned to the requirements of the Class I. exhibits—a detached cottage for a rural district to cost £150, providing a living room, a scullery, three bedrooms and offices.

The structure is framed of wood with brick chimney and foundations; also a brick wall partitioning off the e.c. Internally, the walls, ceilings, etc., are lathed and plastered, the floors boarded, and the partitions formed of upright boards with a cover-fillet on each joint to stiffen the boarding. Externally, the walls are covered with weather boarding nailed to the studding over a sheathing of insulation paper as used for cold storage enclosures. The bottom part of the studding has a packing of silicate cotton, as this is found to be an effectual protection against vermin. A bath is provided in an enclosure of the scullery, so arranged that it can be used (with doors thrown open) as the wash-house part of the scullery, whilst it may be used as a bath without interfering with scullery work. Hot water is run by a short pipe, with a stopcock on it, straight from the copper into bath, avoiding all complication of circulating pipes, range boiler, etc.

The final cost is not yet made up, but excluding the builder's profits and other items arranged for purposes of comparison to be omitted by the exhibition promoters, the contract is well under the £150 aimed at, and it will be possible to improve the quality of the fittings from the very simplest and cheapest which were originally contemplated.




Cost per foot cube, $4\frac{1}{16}d.$ net for Exhibition purposes, or $4\frac{3}{4}d.$ full actual cost.

## PAIR OF COTTAGES FOR G. CHRISTIE MILLER, ESQ.

### PLOT OFF NORTH ROAD.—CLASS 4.

These houses are not being erected on the Exhibition Ground, but in a road off North Road.

The ground plan consists of parlour, 12 ft. 9 in. by 12 ft. 6 in.; kitchen, 14 ft. by 11 ft; scullery, 8 ft. by 7 ft.; larder, coals, and w.c.

The scullery contains a folding bath, which is supplied with hot water from the "Model Cottager" fitted in the kitchen; this fitting is fully described in the particulars of the houses erected on plots 464 and 466.

The w.c. and coal-house are entered from a porch, thus avoiding publicity.

The first floor contains three bedrooms, 11 ft. by 11 ft.; 12 ft. 6 in. by 9 ft.; and 11 ft. by 7 ft. respectively. A linen closet is also provided.

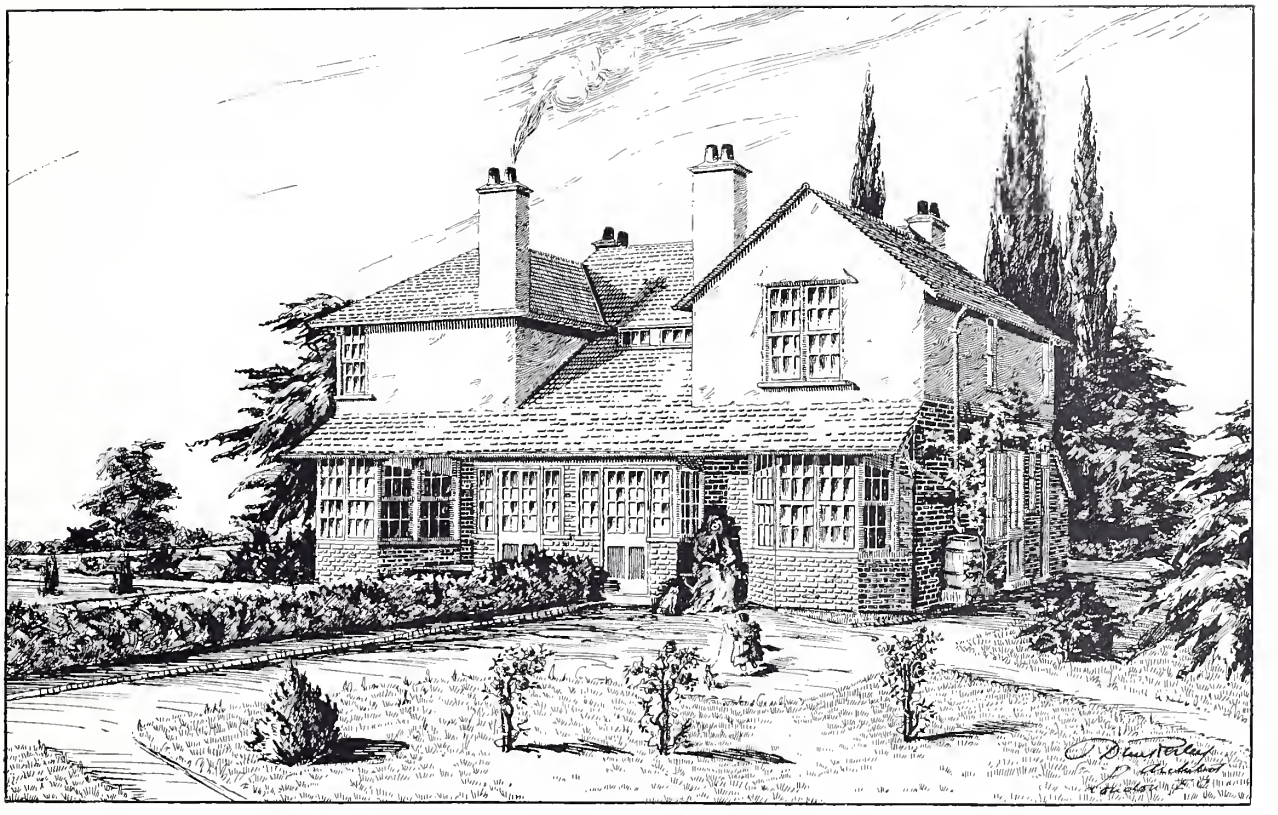
The staircase, landing and all rooms are well lighted.

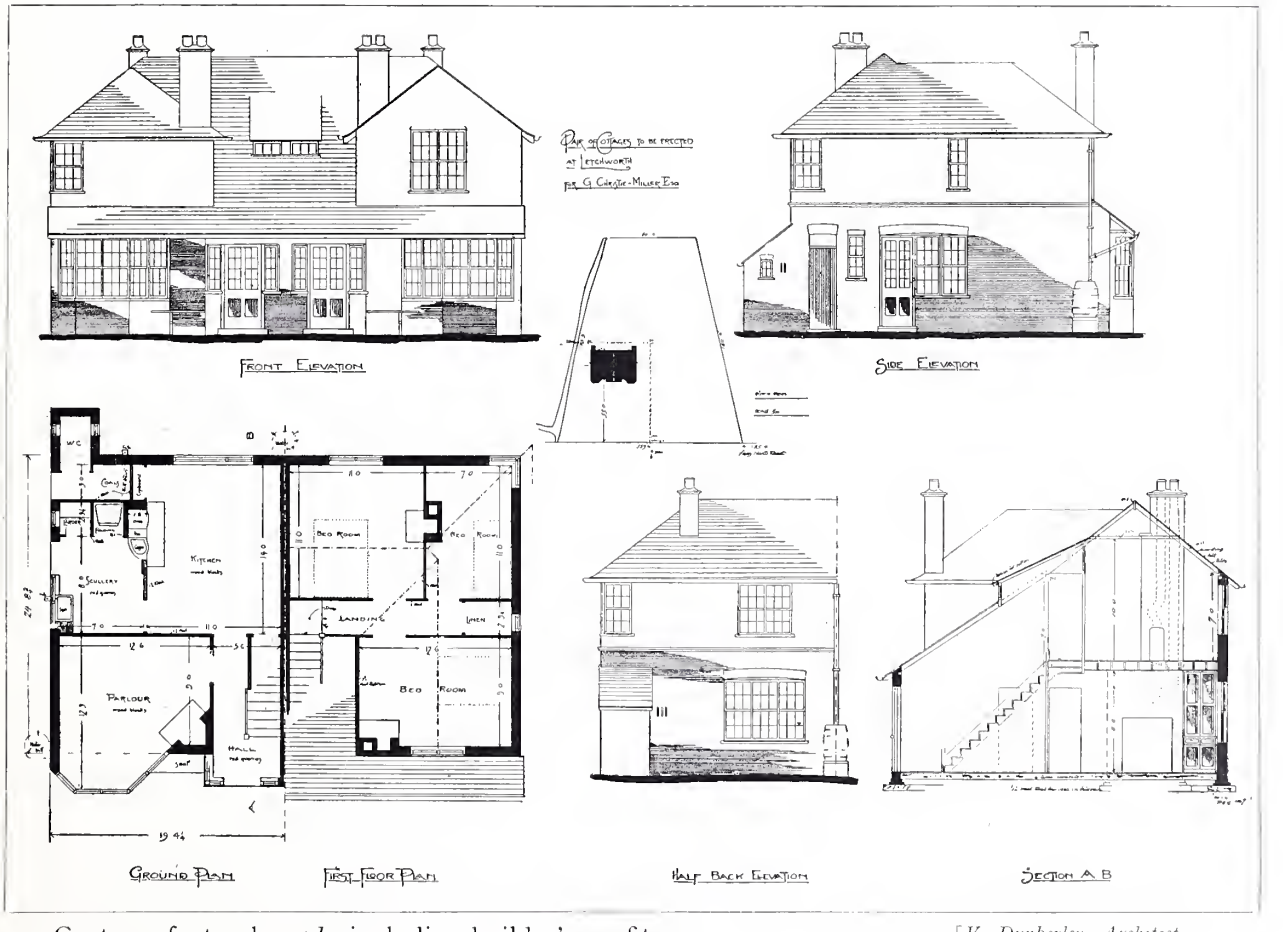
Externally, the houses are being built of dark red Asbestic bricks, the upper walls being finished with rough-cast. The roofs are covered with machine-made tiles. The floors are laid with wood blocks in bitumen with the exception of the scullery, hall, etc., which are laid with 6 in. red quarries.

The alternative cost of each house is as follows:—

| Without builder's profit:— | £ | s. | d. | £ | s. | d. | |
|---|---|---|---|---|---|---|---|
| *A.* Excluding "Model Cottager," but including ordinary kitchener and without bath ... | 188 | 0 | 0 | 31 | 6 | 8 | per room. |
| *B.* Including the "Model Cottager" and bath | 190 | 0 | 0 | 31 | 13 | 4 | ,, |
| Or, including builder's profit, *A.* ... ... | 195 | 16 | 0 | 32 | 12 | 8 | ,, |
| ,, ,, ,, *B.* ... ... | 207 | 10 | 0 | 34 | 11 | 7 | ,, |

The architect is Mr. V. Dunkerley, of 8, Frederick's Place, Old Jewry, E.C.






Cost per foot cube, 5*d.*, including builder's profit. [*V. Dunkerley, Architect.*

## COTTAGES DESIGNED FOR MR. A. J. BATEMAN, RAMSEY, HUNTS.

It is thought, in this case, that the object in view, viz.:—to provide suitable cottages for the occupation of labourers at a cost not exceeding £150 each,—can best be attained by building a pair of semi-detached cottages rather than a single one, for the reasons that better accommodation for the amount expended can be obtained, offering such apparent advantages as larger rooms, concrete over the site, and greater general warmth, as all four sides of the cottages are not exposed to the weather. Moreover, it is not often that labourers' cottages are required singly on a country estate.

A distinctive feature of the plans will be found in the arrangement of the wash-houses, which are placed one behind the other with the double object in view of placing the earth closets as far as possible from the living portion of the cottages and in keeping the wash-houses entirely apart from the living kitchen, thus preventing the vitiation of the air of the whole house by the steam and smell, inseparable from the washing of dirty clothes, which is so objectionable a feature in the majority of cottages of this class, and is especially undesirable and unhealthy where there are young children.

It will also be noticed that the pantry space is far larger than is usually devoted to this purpose; it is not a small, inconvenient cupboard under the stairs, as is frequently the case. The importance of a spacious and thoroughly airy store for articles of food, milk, and other produce cannot be over-estimated. This arrangement of the pantry also affords a roomy landing over.

A further feature of the design is the "Ruberoid" flat over front projection, which, in addition to giving a pleasing effect to the elevation, enables the cottages to be roofed very inexpensively with one small span, thus avoiding great height in the roof and consequent waste of space, and also the cutting of roofs to form gable hips and valleys; the money saved by this arrangement is utilised to increase the size of rooms.

In order to still further keep the cost as low as possible, three expensive trades have been omitted altogether, viz.:—Mason (the steps and sills being formed of brick laid on edge in cement); plumber (there being no leadwork); and, lastly, the necessity for drains has been avoided altogether. Large butts are provided to catch the rain-water, and earth closets are fitted instead of water closets, as it more often occurs that cottages of this type are required in places which have no sewage system. The expense of providing patent systems is thus avoided, and a receptacle is provided under each sink so that the waste water can be utilized for fertilizing the garden.

The living kitchen has been rightly considered the most important room in the house, and the greatest amount of space has been allotted to it, a tile floor being provided at slightly additional cost over the ordinary wood floor on account of the extra cleanliness and also ease of cleaning.

Coals and wood are purchased in small quantities by the agricultural labourer, and, therefore, only a very small space has been allotted for storage.

The materials selected are those which are most easily secured in a country district; any repairs can be done by the estate carpenter, and patent materials involving skilled labour, probably to be obtained only from a distance when repairs are necessary, being avoided.

## COTTAGE DESIGNED BY MESSRS. BAKER AND MAY, ARCHITECTS.

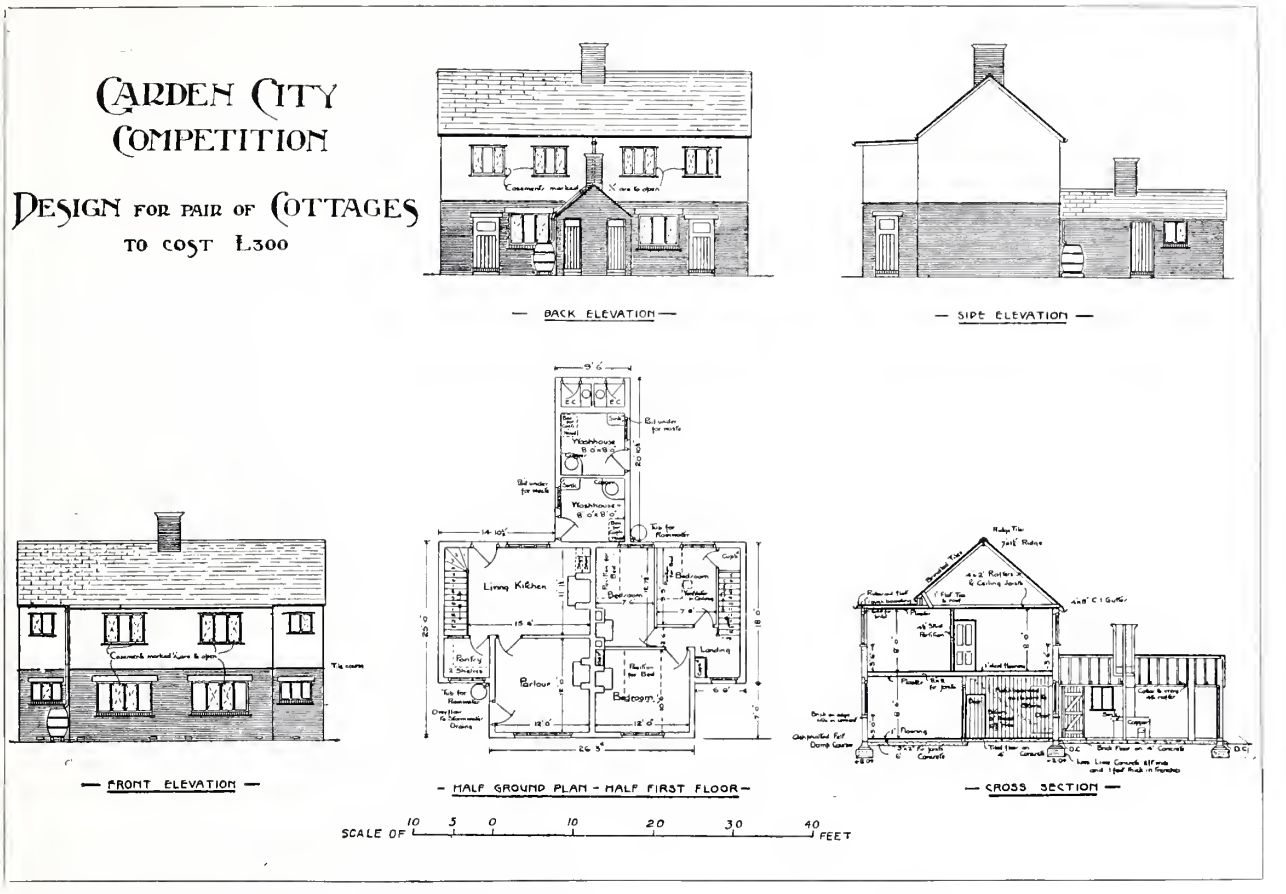
This was entered in the class for cottages costing £150 or under, the estimated cost being £149 12s., exclusive of builder's profit.

The walls, which are of timber framing, stand upon a low concrete wall, forming a plinth carried about 12 in. above the ground line, with a damp-proof course between of asphalted felt. The timber framing is lathed and rough-cast externally, the walls being pugged, and lathed and plastered inside.

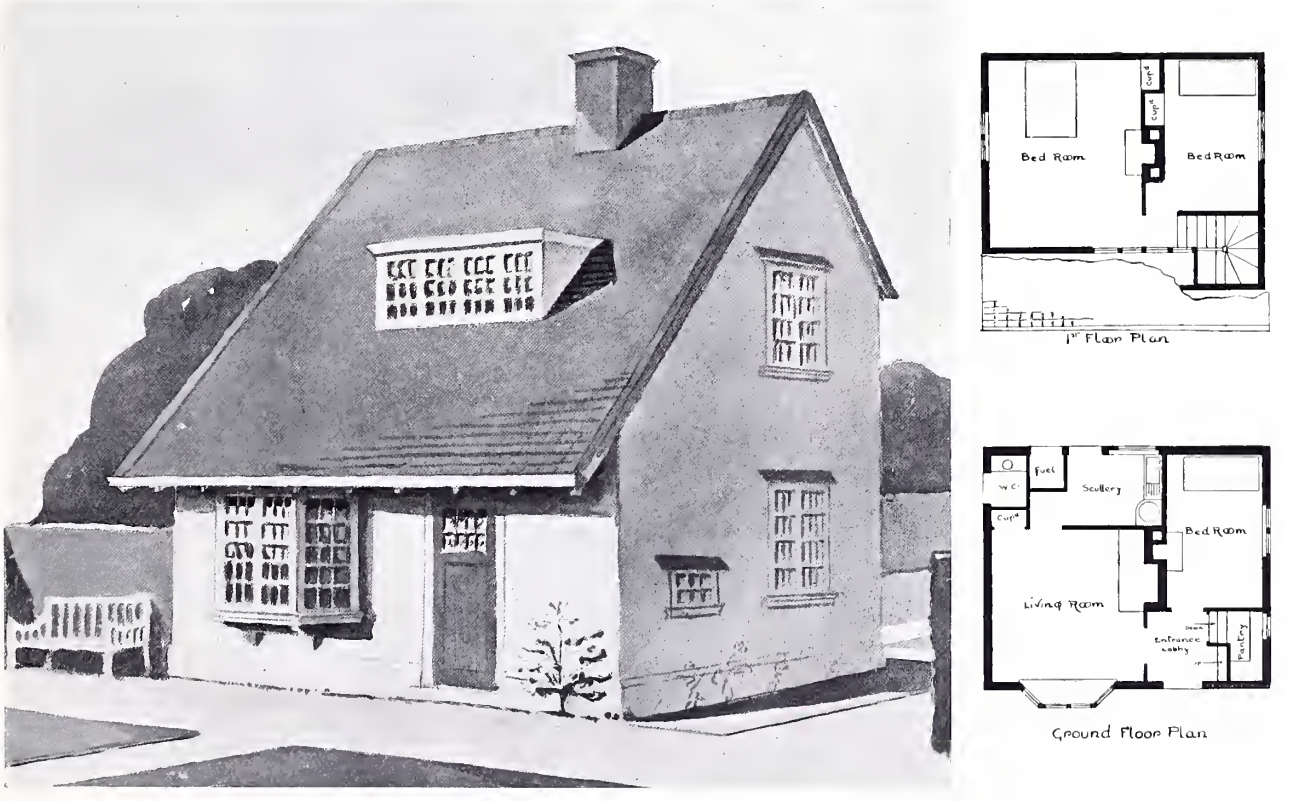
The roof is covered with French tiles torched from inside.

The ground floors are formed with 4 in. cement concrete, covered with 2 in. breeze concrete, to which are nailed $\frac{7}{8}$ in. deal floor boards, except floors of scullery, fuel, and w.c., which are cement floated. The living room is fitted with special convertible stove, which can be used as cooking range, or ordinary open fire grate.

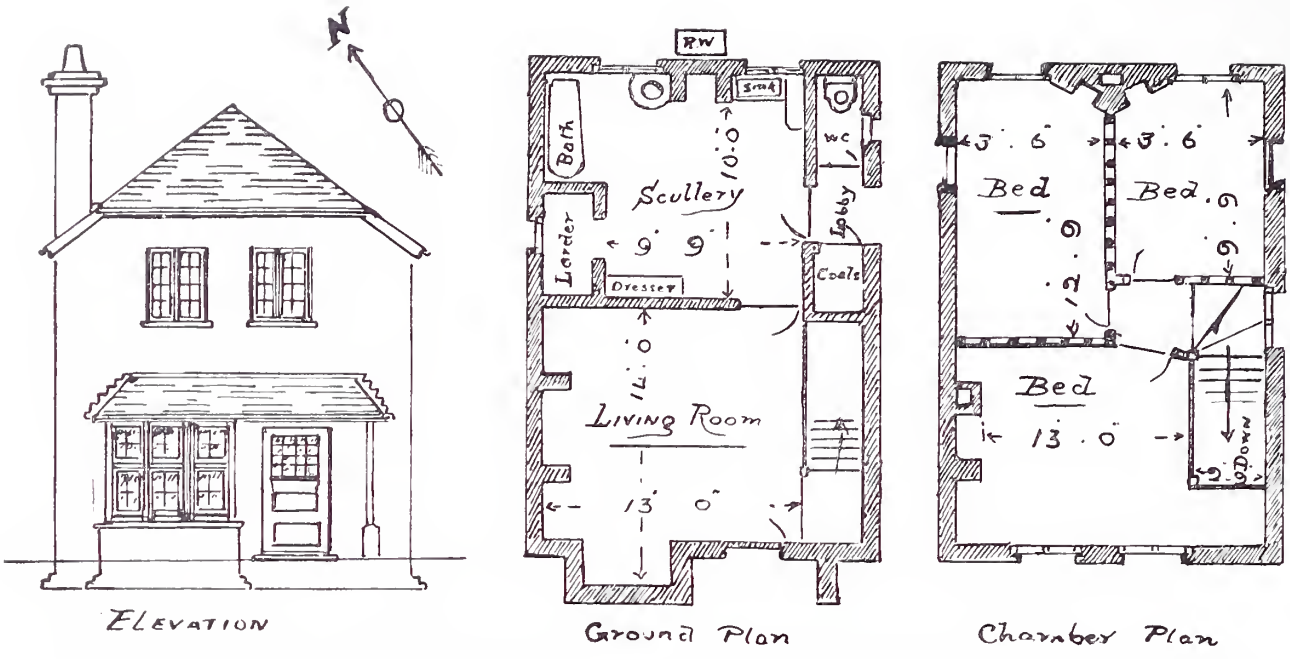
In designing this cottage the architects have endeavoured to combine internal convenience with a simple but picturesque exterior.


GARDEN CITY
COMPETITION
DESIGN FOR PAIR OF COTTAGES
TO COST £300
— BACK ELEVATION —
— SIDE ELEVATION —
— FRONT ELEVATION —
— HALF GROUND PLAN - HALF FIRST FLOOR —
— CROSS SECTION —
SCALE OF 10 5 0 10 20 30 40 FEET

The cost per foot cube is estimated at $3\frac{1}{2}d.$




[*Baker & May, Architects, 21, Liverpool Street, E.C.*




Cost per foot cube, slightly under 5*d*. [*Robert J. Wright & Co., 5, Benslow, Hitchin.*

## NOTES ON A SINGLE COTTAGE ERECTED BY MESSRS. R. J. WRIGHT & CO., BUILDERS.

Foundations, cement concrete: 9 in. walls. English bond cement, rough-cast exterior; solid frames and casements to all windows; red tiled roof, half hip; height of ground floor-rooms, 8 ft. 3 in.; height of bedrooms, 7 ft. 9 in.

Special features: Economy of space through absence of passages: all offices under one roof; soft-water tank connected to sink from tank; w.c. open to fresh air, yet convenient to house.

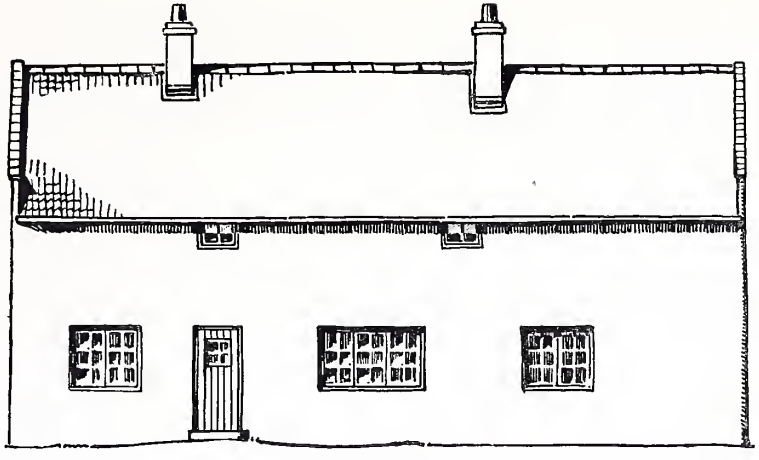
Estimated cost, with profit added (inclusive), £180; if built in pairs, £340 per pair.

## COTTAGE DESIGNED BY MR. A. RANDALL WELLS, ARCHITECT.

The cottage is built of machine-made bricks, costing 12*s.* a thousand in the yard, and roofed with hand-made pantiles. The mortar joints are large and well flushed up. The exterior is cream washed, the inside plastered and distempered. The joinery is all oil stained, which does not scratch as paint does. The special features are that the construction is of the simplest possible, and the bedroom accommodation adequate: that is to say, there is comfortable sleeping space for six people. The living room is fitted with an open fire, with small oven *under* it, and with a "Norfolk" oven. The latter is claimed to be most economical. The scullery is fitted with an "Ellkay" tip-up bath. The copper has a tap from which to draw hot water. There is a hanging recess with curtain rod in each bedroom.

This cottage is entered in the £150 class.

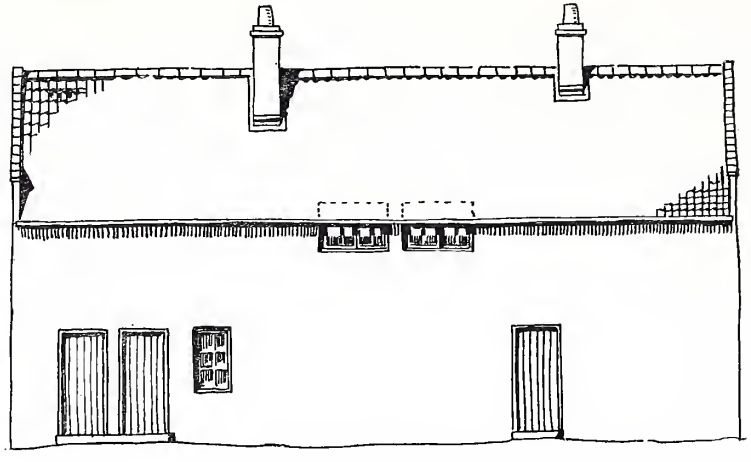
The cost per foot cube is estimated at $2\frac{3}{4}d.$, making the total cost £150, but with builder's profit and architect's commission the cost is 3*d.* per foot cube.



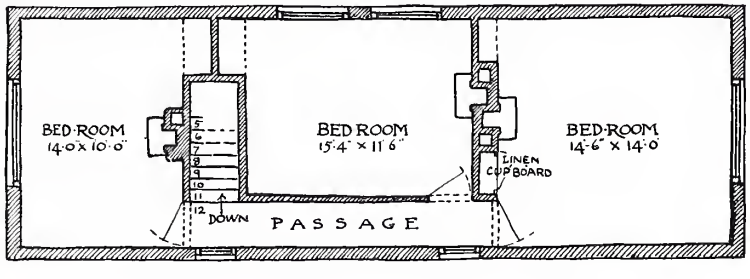
SOUTH·ELEVATION

DETACHED·COTTAGE
NORTON·ROAD·THE
GARDEN·CITY
150£ CLASS·IN
CHEAP·COTTAGE·
COMPETITION

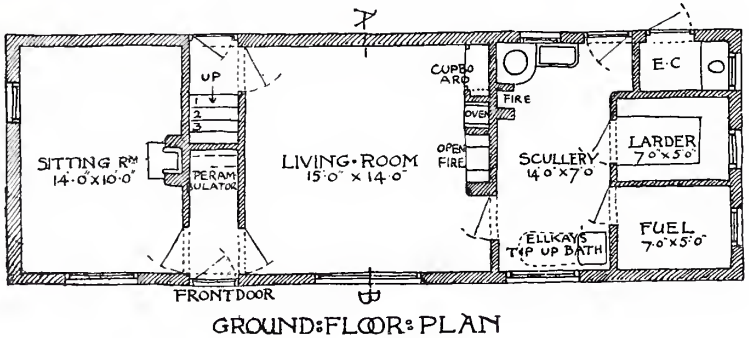
A·RANDALL WELLS
CORNWALLIS·GDS
HASTINGS
ARCHITECT



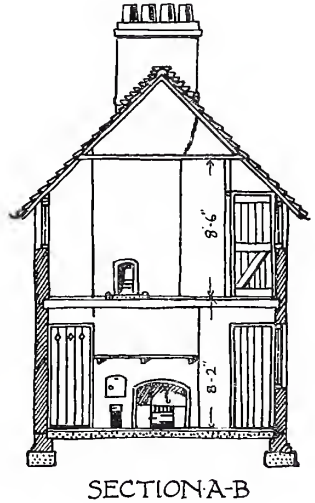
NORTH·ELEVATION



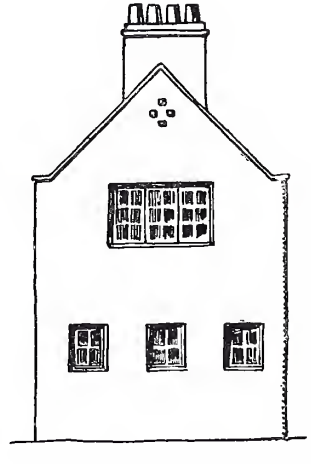

FIRST·FLOOR·PLAN



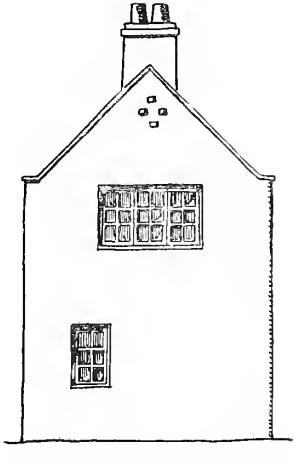

GROUND·FLOOR·PLAN



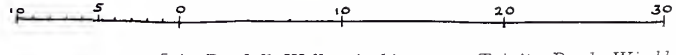

SECTION·A-B



EAST·ELEVATION



WEST·ELEVATION




Cost per foot cube, $2\frac{3}{4}d.$, or with profit, etc., $3d.$

[*A. Randall Wells, Architect, 45. Trinity Road, Wimbledon, S.W.*

## COTTAGE FOR CLASS I. BY THE BRITISH METALLIC ROOFING COMPANY, ON HUNTER'S INTERLOCKING SYSTEM.

### NOTES ON SPECIAL FEATURES.

The object in view has been to produce a building of steel sheets and steel girders (or wooden spars with special girders) all thoroughly interlocked, and which shall be water and storm proof, cool in summer and warm in winter. The special features are:—

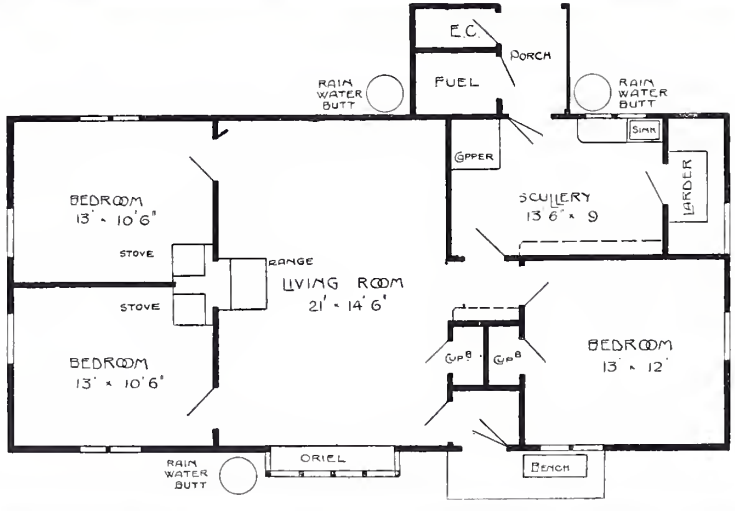
(1) Cheapness—very considerable saving in labour is effected. (2) Strength. The interlock is believed to be the best and most perfect extant, and yet quite simple. (3) Durability—the external work is of galvanized steel sheets, coated with the best paint procurable; liability to corrosion is minimised to the utmost, and nuts, bolts, nails and screws are practically dispensed with. (4) The appearance outside and inside is rendered very effective, avoiding the admitted unsightliness of the ordinary corrugated sheeting. (5) Easily and quickly erected by anyone following printed directions. (6) A perfect roof is assured. (7) Protection from penetrating cold and heat is amply provided for by the insertion of a thorough non-conductor, such as slag wool, hair, felting, etc. (8) The buildings are practically fireproof. (9) They are cleanly and sanitary, not harbouring insects. (10) Easily decorated in any of the recognised styles. (11) The inside may be (*a*) Of steel sheets forming panels which are rendered attractive by decoration. (*b*) Of woodwork. (*c*) Lath and plaster or plaster slabs. (12) The buildings may be taken down and removed without damage. (13) Safety from lightning, a metal roof being safer than any other where there is proper conduction to the earth.

The cost is £148, exclusive of architect's and builder's profit. The price for a similar cottage on purchaser's foundation is £156.

## COTTAGE CONSTRUCTED BY THE WIRE WOVE ROOFING COMPANY.

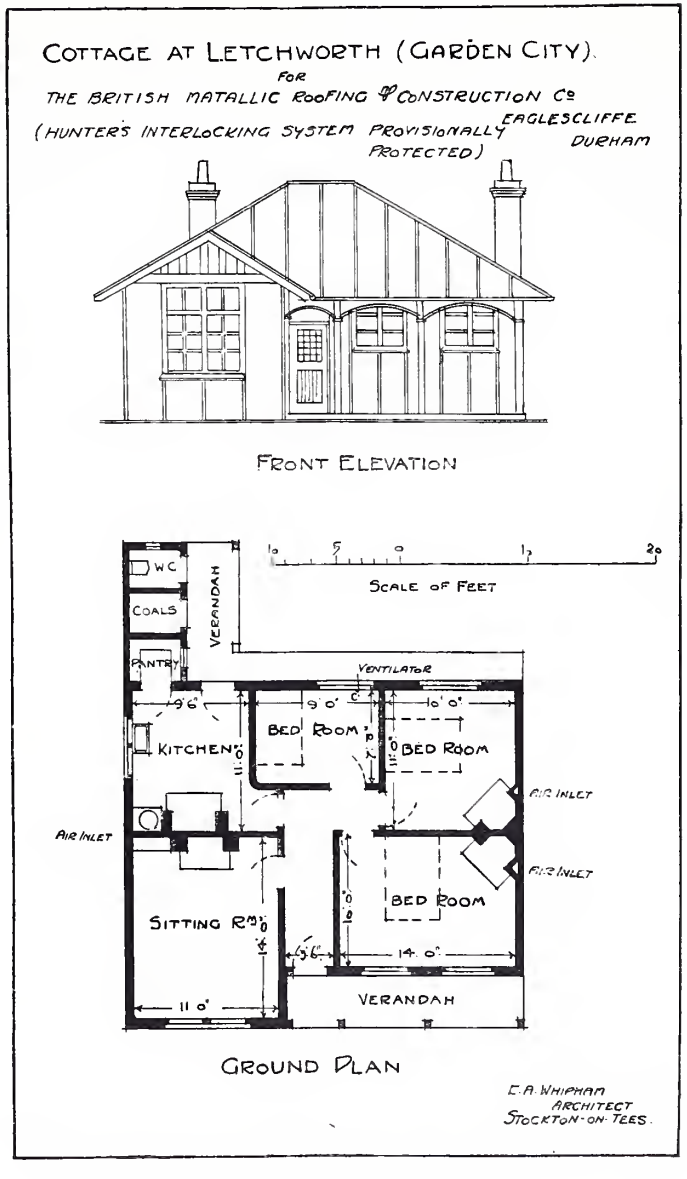
The Wire Wove Roofing Company, of 108, Queen Victoria Street, E.C., show, in the class for a labourer's cottage to cost £150 (exclusive of carriage, fencing, water supply and drainage), a timber-built dwelling on one floor. It contains rooms of the following dimensions:—Living room, 21 ft. by 14 ft. 6 in.; one bedroom, 13 ft. by 12 ft.; two bedrooms, each, 12 ft. by 10 ft. 6 in.; scullery, with larder, 17 ft. 6 in. by 9 ft.; entrance lobby with halved door; back addition 10 ft. by 7 ft., containing porch, coal house, and e.c. The height to eaves is 6 ft. 6 in., and to ceiling 8 ft. 6 in., giving the following net cubic contents:—Living room, 2,346 cubic feet, one bedroom 1,193 cubic feet, two bedrooms, each, 1,044 cubic feet.

The construction is as follows:—Usual brick foundations and chimney; cooking-range supplying hot water to scullery; small fireplace in each of two bedrooms, and portable copper in scullery. The walls are of $1\frac{1}{4}$-in. vertical boards, overlapping each other $1\frac{1}{2}$ in. and treated with brown preservative stain. They are carried, with an interlining of "Ferol" sheeting, on timber framing of yellow deal. Internally, they are lined with tongued and grooved matchboarding, which also forms the ceilings. In the scullery, the walls are stained, and the ceilings are all distempered cream colour. In the living and bedrooms, the matchboarding is covered with canvas, which is distempered in some cases and left plain in others. The roof is covered with 1 in. tongued and grooved boards, upon which is laid thick "Ferol" sheeting, with which also the wooden eaves gutters are lined. The windows are casements. 2 in. thick, and glazed with 21-oz. glass. The floors are of pitch pine, narrow boards tongued and grooved together, and laid on 2 in. by 4 in. joists with 6 ft. 8 in. bearings.

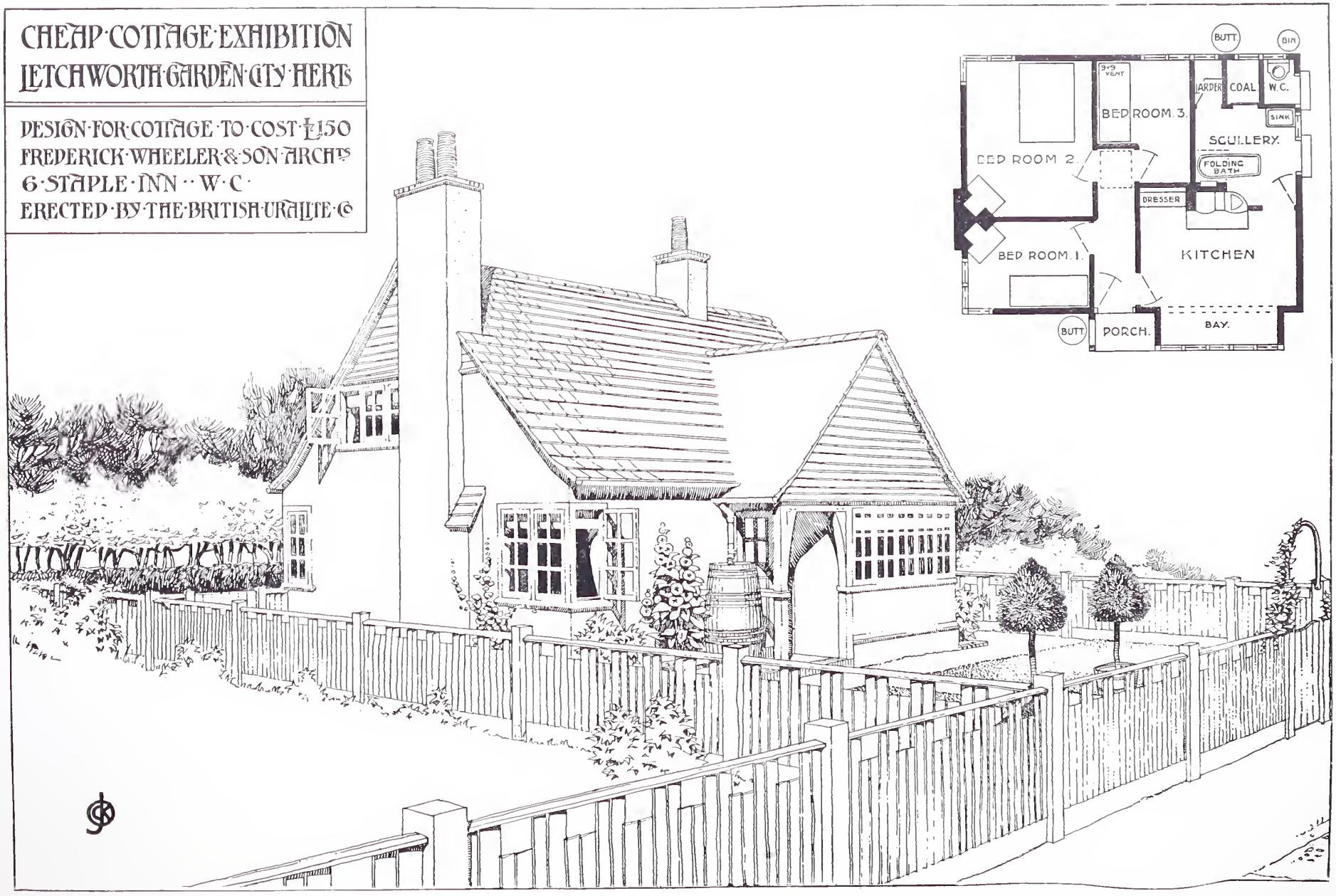



[*Wire Wove Roofing Co.*, 108, *Queen Victoria Street.*

Cost per foot cube, 3·34*d.*, excluding drainage, water supply, &c.




Cost per foot cube, $3\frac{1}{2}d.$




Cost per foot cube, 4*d*.

## SINGLE COTTAGE DESIGNED BY MESSRS. F. WHEELER AND SON, ARCHITECTS, FOR THE BRITISH URALITE COMPANY.

The illustration shows a detached cottage to cost £150. This design has been entered in Class I. (Architectural section), by the architects, Messrs. Frederick Wheeler & Son. It contains the accommodation shown on plan, and is being erected by the British Uralite Co. in the Building section, Class I. (Town area), the cost being £150, exclusive of the extra cost of Cornes' combined range, copper and bath over an ordinary kitchener, and an e.c. substituted for the w.c. By the omission of the partition between passage and kitchen, the latter would be considerably increased in size.

The chief advantages of this cottage are:—(a) It is cheap; (b) permanent; (c) fire-proof; (d) vermin-proof; (e) cool in summer, warm in winter; (f) ease and rapidity of erection (five to six weeks); (g) materials are small in bulk and easy of cartage, consequently the cost of carriage is small; (h) fit for occupation immediately on completion; (i) when complete has all the appearance of a permanent structure (all the fireplaces and chimney-stacks are in brick, rough casted externally).

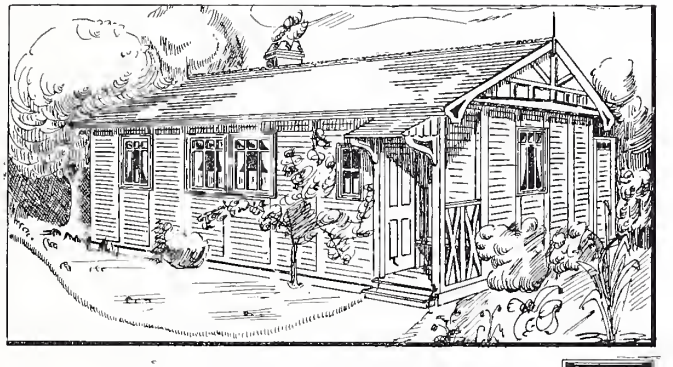
## COTTAGE ERECTED BY THE DARLINGTON CONSTRUCTION COMPANY, LTD.

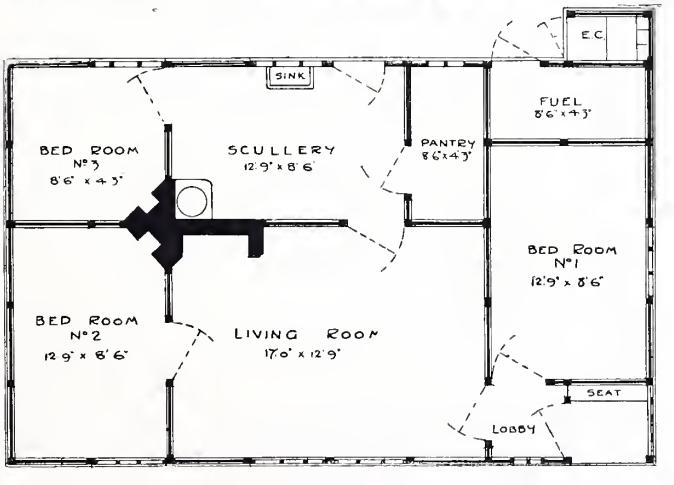
A timber-framed building, the upright posts being cut to a special section into which the boards are fitted; they are fastened into place, in the first instance, by a metal tongue (as shown in the post) which engages a saw cut in the board, and are kept in this position by a wedge, which is driven in, this again being retained by the moulding. Thus, the use of nails or screws is avoided, and labour as well as material saved. Further, should the boards pine, they are easily adjusted by pulling out the wedge, closing up the boards, and replacing the wedge again.

The building is lined with fire-proof and non-conducting asbestos cement sheets, which are fixed as panels on the walls between the posts, the effect in the room being good. The ceiling is also of this material, and can be either painted or papered.

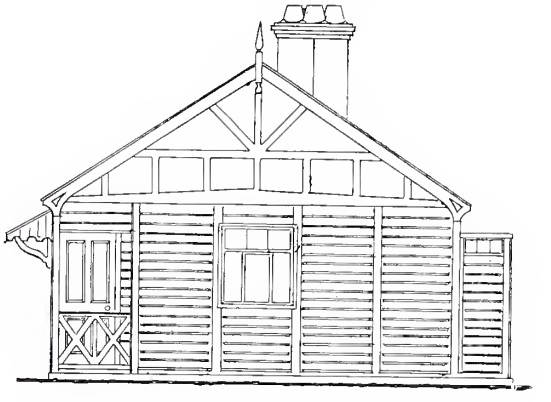
The roof is slated with red asbestos tiles, which are light and of very good appearance.

The floor of the building is made in sections and so fixed that all gas and water pipes can be examined at a moment's notice and any individual board can be easily removed. The price is £150.

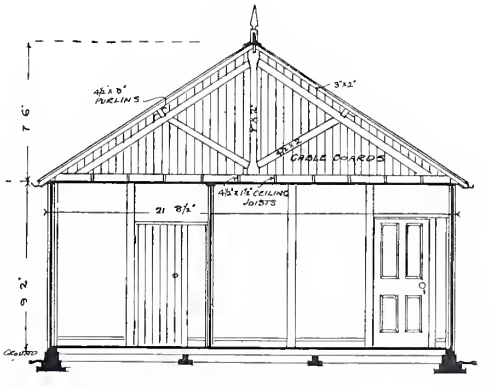





PLAN



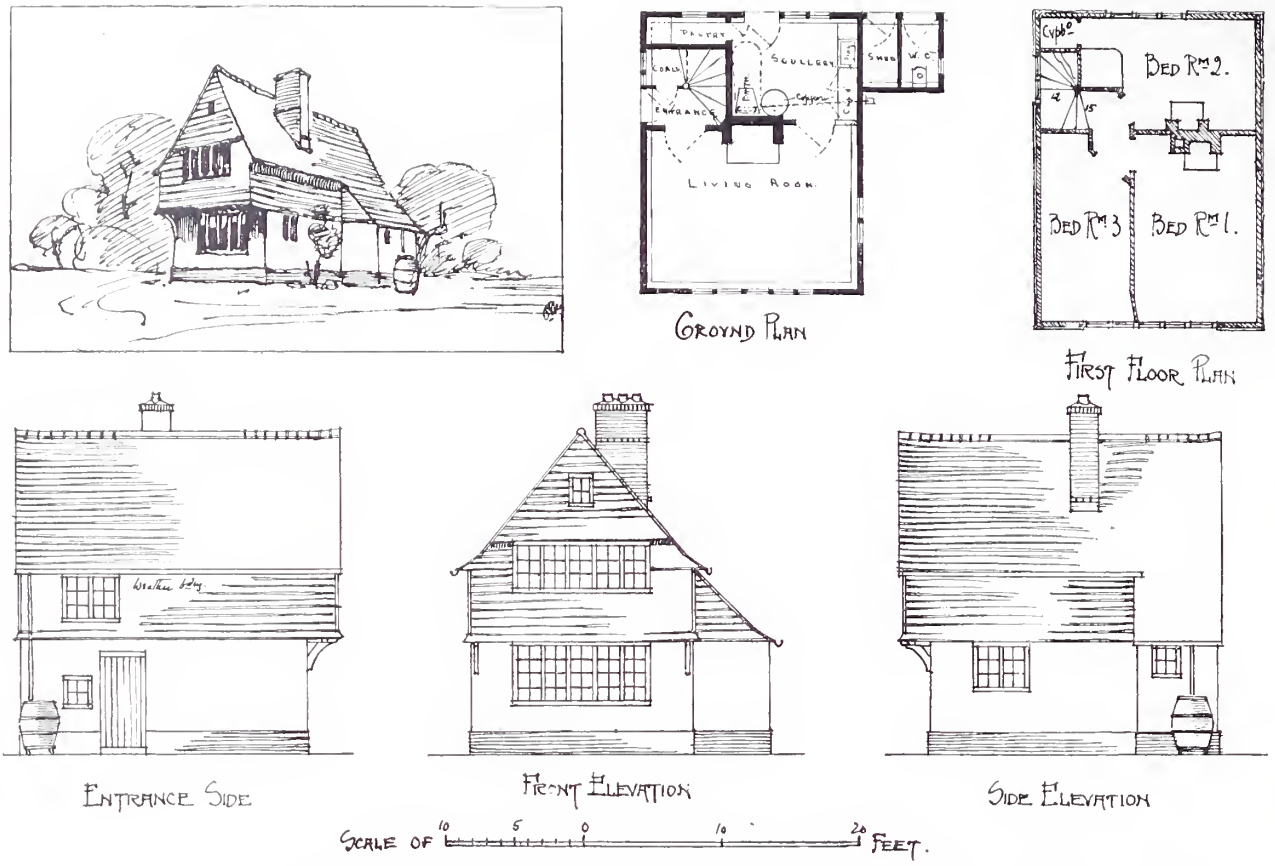
END ELEVATION




SECTION

Cost per foot cube, 3·7*d.*

[*Darlington Construction Co., Bank Top, Darlington.*




[*Oswald P. Milne, Architect. 77, Chancery Lane, E.C.*

Cost per foot cube, 4½*d.*, or, as fitted with bath and hot water, 5*d.*

## COTTAGE DESIGNED BY MR. OSWALD P. MILNE, ARCHITECT.

This cottage is entered for the competition for the best cottage for £150. It is built very much on the principle of the charming old cottages one sees throughout the length and breadth of England. It depends for its effects upon simplicity of design, material, and construction. An attempt has been made to produce a cottage that may be light, cheerful, and comfortable to live in, and that may be up to date in its internal arrangements, but which externally would harmonise with the delightful villages and rural districts of England; that will look like a country cottage and not like a small suburban villa entirely out of its place.

Small cost in erection has also been studied. The materials, too, are such as may be got easily in almost any district, the cottage being built of brick and timber. The studwork is covered externally with weather boarding and plaster; the roof is covered with tiles. The cottage consists of, on the ground floor, a fair sized living room, a scullery in which all washing-up and cleaning is to be done, a pantry, a coal-hole, shed for garden implements, and a w.c. or e.c., as the case may require.

On the first floor are three fair-sized and airy bedrooms, two having fireplaces, and a large cupboard. The scullery is fitted with a bath, so that, on occasion, this room can be used as a temporary bathroom; the bath and the scullery sink have hot water laid on from a boiler behind the range, which is an "Ellco" supplied complete by Ellkay and Cornes, Limited, London.

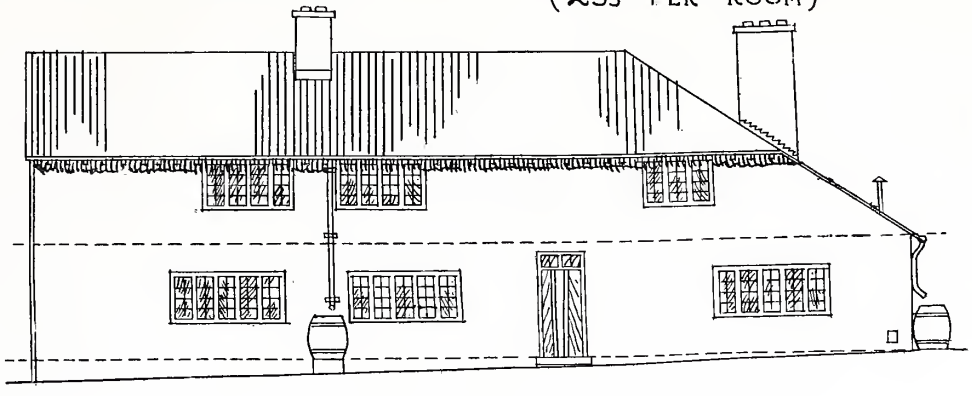
The actual cost, as built at Letchworth, *not* allowing for builder's profit, will be about £135.

## COTTAGES DESIGNED BY MR. W. CURTIS GREEN, A.R.I.B.A., ARCHITECT.

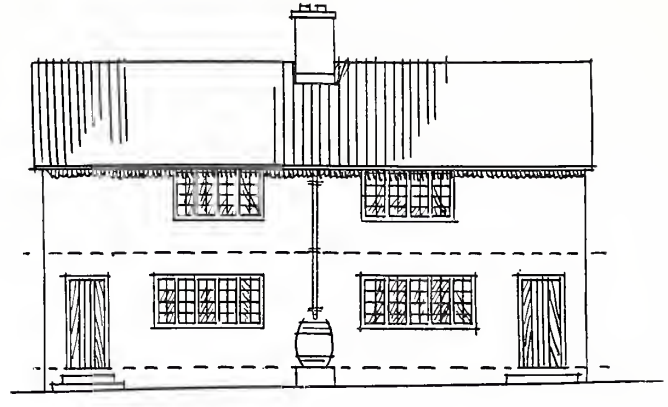
Pair of cottages for G. P. Gooch, Esq., under class limiting cost to £150 each. Materials: Fletton links, whitewashed, pantile roof.

Block of cottages for Ivor Ll. Tuckett, Esq., under class limiting cost to £35 per room. Materials: Fletton links, whitewashed, pantile roof. Variety of arrangement in each cottage. W. Curtis Green, architect.

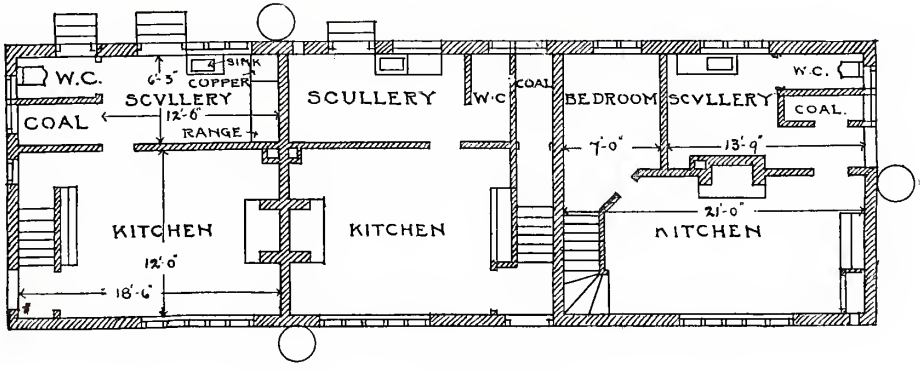
# THREE COTTAGES FOR IVOR Ll. TUCKETT ESQ. PAIR OF £150 COTTAGES FOR G.P.GOOCH ESQ: (£35 PER ROOM)



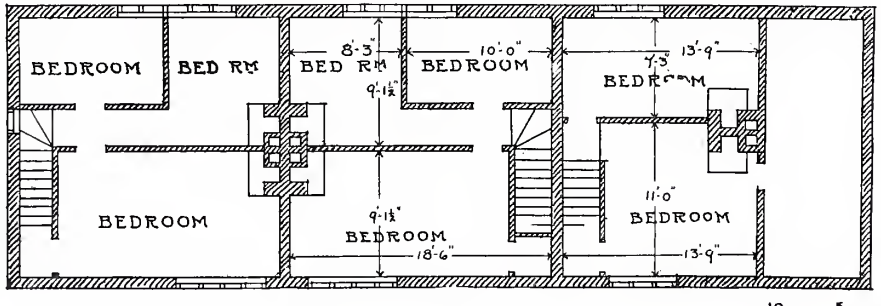
FRONT ELEVATION



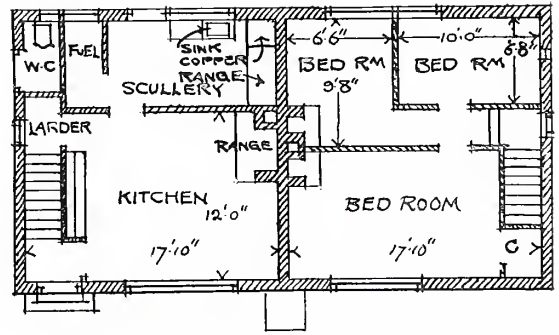
FRONT ELEVATION




GROUND FLOOR PLAN.



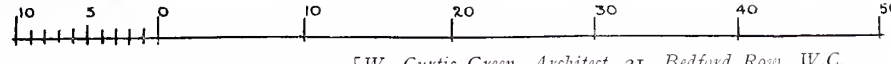

FIRST FLOOR PLAN




GROUND PLAN FIRST FLOOR PLAN

W. Curtis Green
Arch: 1905

SCALE




Cost per cube foot for both cottages, 5*d*.

[*W. Curtis Green, Architect, 21, Bedford Row, W.C.*

## COTTAGE DESIGNED BY MR. PERCY B. HOUFTON, ARCHITECT.

The cottage is self-contained. The inclusion of the coal-place, w.c., and open lobby within the rectangle of the ground plan provides additional bedroom space. The aspect of the rooms has been considered. The living room and two of the bedrooms have windows to the south. The larder window faces north. The plan could be adapted for a south aspect by reversing the position of the larder and the w.c., or the latter could be separately accommodated.

The cottage would be specially suitable for building round a green or open space, as the living room would look on to this and also have a view of the road, which is so much appreciated by some tenants. The double windows to the living room and the principal bedroom give facilities for cross ventilation.

No advantage has been taken of side lighting in order to show that the plan can be built in blocks of three or four. If built in blocks, the centre bedroom windows might be gabled to form a contrast with the straight eaves line.

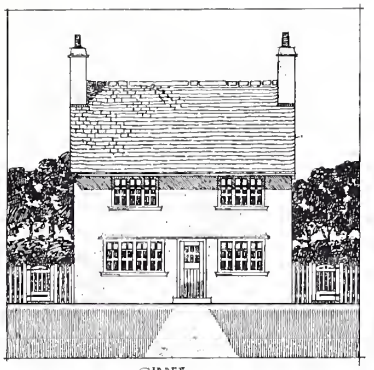
The walls are of local bricks, built in mortar, rough cast in cement, and lime whitened. The roof is of local make plastic red tiles.

The cottage has been erected for Mr. Arthur Green, Ironfounder and Stove Grate Manufacturer, by Messrs. Green Bros., Contractors and Timber Merchants, both of Whittington Moor, Chesterfield, to the design of Percy B. Houfton, Architect, Chesterfield.

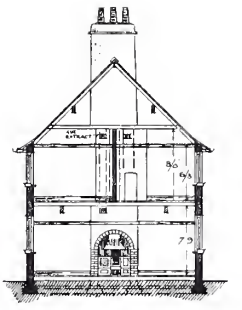
The cost per foot cube is estimated at $3\frac{1}{2}d.$, the total cubic contents being 10,271 cubic feet and the total cost £150.

## COTTAGE DESIGNED BY MR. A. T. MARTINDALE, ARCHITECT, AND BUILT BY MR. T. V. MARTINDALE.

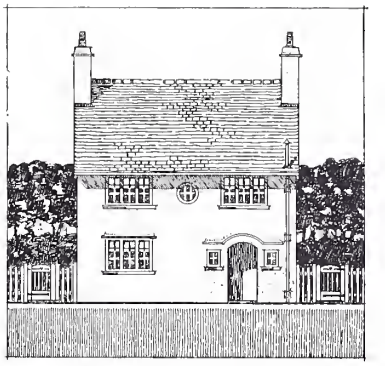
These sketches illustrate a cottage built by Mr. T. V. Martindale, intended to be in competition for the best £150 cottage. On a site immediately adjoining, the same builder has also erected a semi-detached pair, similar in plan and design, the cost being estimated at just under £300. The roofs are covered with red tiles, having overhanging eaves; walls are constructed with red bricks finished with rough-cast above the stringing course, which, together with sills, heads, and steps, are of artificial stone, manufactured by the builder. The floors of entrance, pantry, and wash-house are covered with cement tiles, 6 in. by 6 in., with pattern formed of various colours, also manufactured by the builder. The wash-house is fitted with sink, bath, and copper with tap so placed as to supply hot water to bath, which is covered with movable lid and side, contrived to form a table when not in use. The accommodation provided is as follows: Sitting-room, 11 ft. by 11 ft. 6 in.; kitchen, 15 ft. by 12 ft.; wash-house, 5 ft. by 7 ft. 6 in.; bedroom, 12 ft. by 11 ft. 6 in.; child's bedroom, 8 ft. by 8 ft. 6 in.; bedroom, 11 ft. by 17 ft. in widest and 11 ft. 6 in. in narrowest parts.

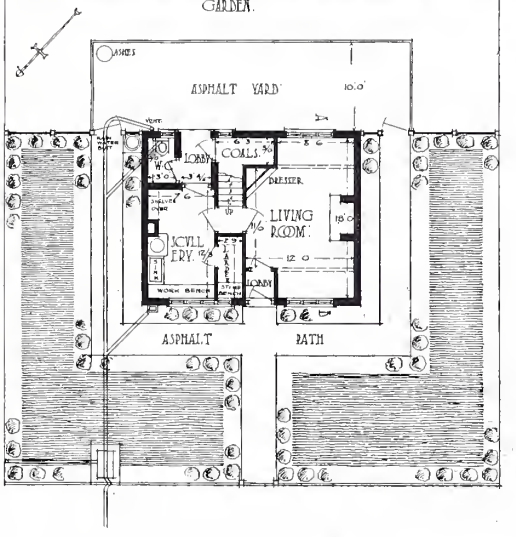


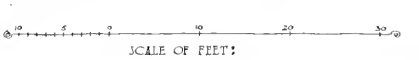
GARDEN.

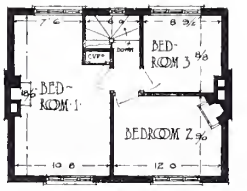


SECTION · A · B ·

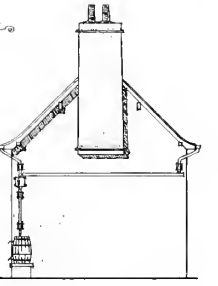





BEDROOM PLAN.

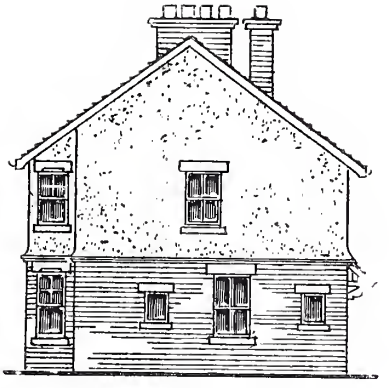


END ELEVATION.

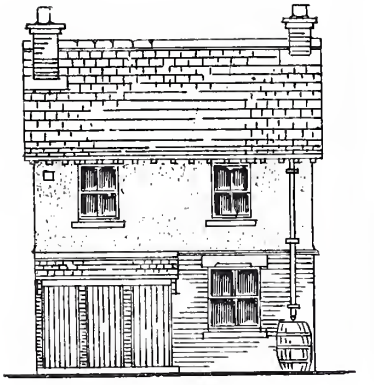
COMPETITION £50 COTTAGE.
PLAN OF COTTAGE ERECTED AT LETCHWORTH FOR THE EXHIBITION BY MESSRS GREEN BROS OF WHITTINGTON NEAR CHESTERFIELD. PERCY B. HOVETON ARCHT CHESTERFIELD

Cost per foot cube, $3\frac{1}{2}d.$

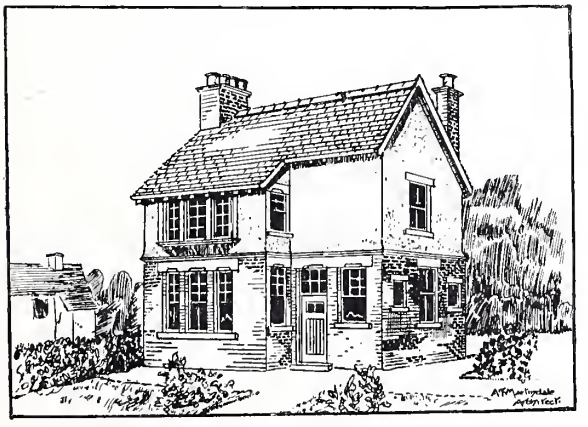
FRONT ELEVATION



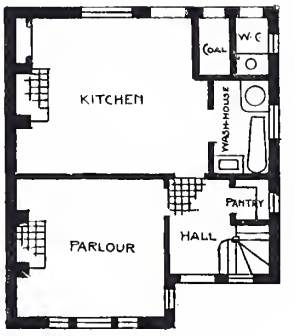
SIDE ELEVATION



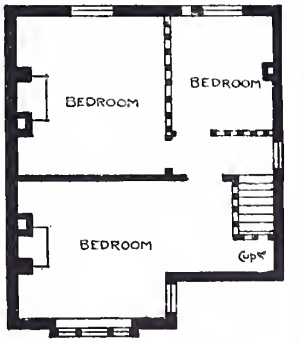
BACK ELEVATION



Cost per foot cube, $3\frac{1}{2}d.$




GROUND FLOOR PLAN




FIRST FLOOR PLAN

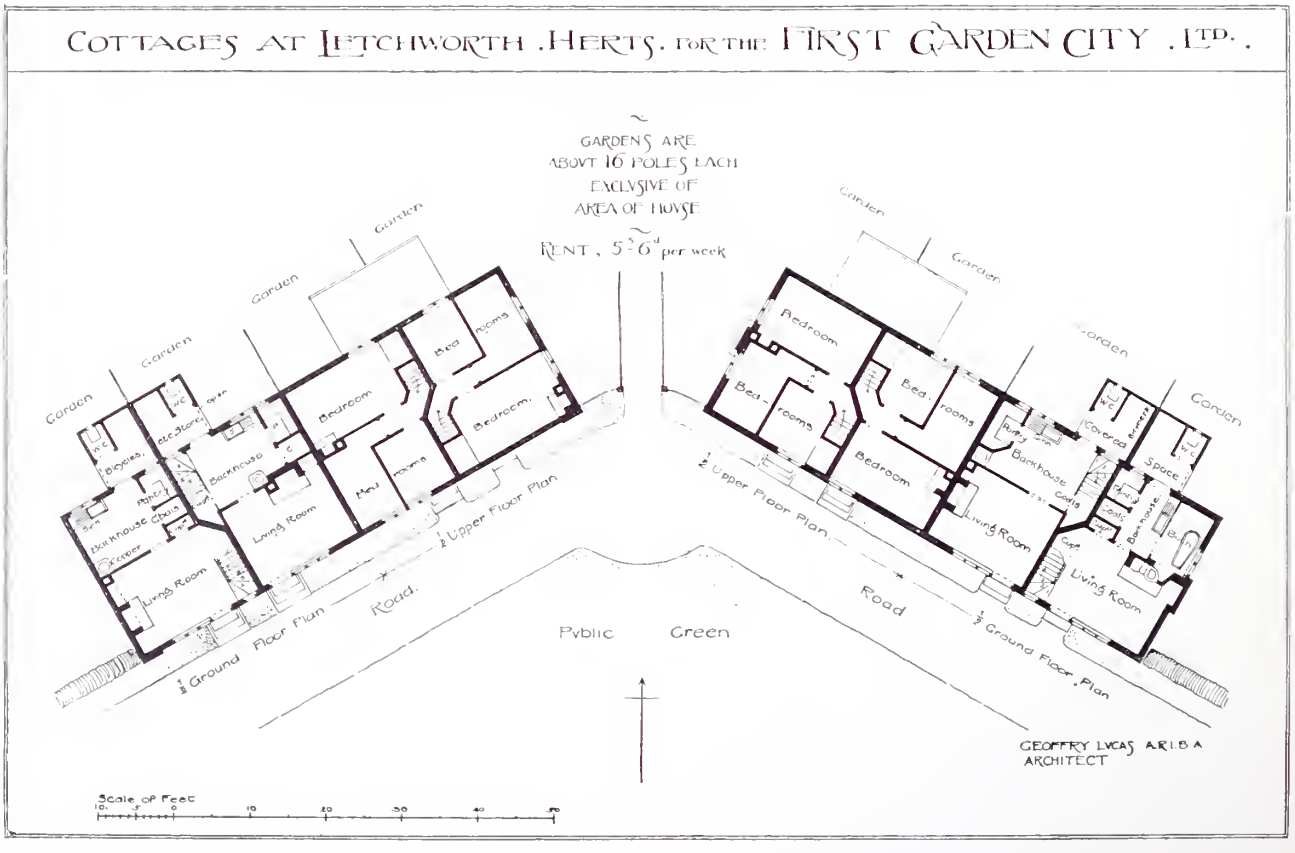
[*A. T. Martindale, Architect*, 68, *Wellington Road, Bridlington.*

These eight cottages for the First Garden City have been built on the estate at Letchworth. The accommodation in each consists of a living-room 14 ft. 4½ in. by 11 ft. 3 in., a back house 10 ft. 6 in. by 9 ft., containing copper and sink; in addition, on the ground floor are, a china cupboard, coal house, pantry, covered space, and w.c. Upstairs, each cottage has three bedrooms, the largest of which contains a fireplace, the others having ceiling ventilators.

The materials employed are local red bricks for facings, lias lime roughcast for the upper stories, and red tiled roofs with half-round ridge tiles. The outbuildings are of tarred weather boarding.

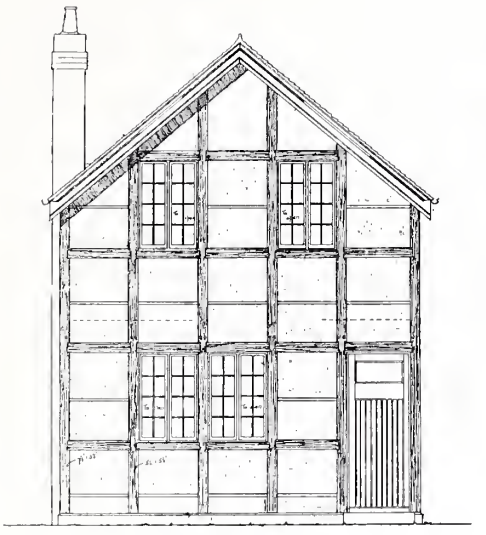
The contract price was £1,510, which included drainage and £10 for contingencies. This works out at 5¼*d.* per foot cube, or £188 15*s.* each. Each cottage has 16 poles of garden ground adjoining, and the proposed rental is 5*s.* 6*d.* a week.

Mr. Geoffry Lucas, A.R.I.B.A., of 16, Hart Street, Bloomsbury, and Hitchin, is the architect.

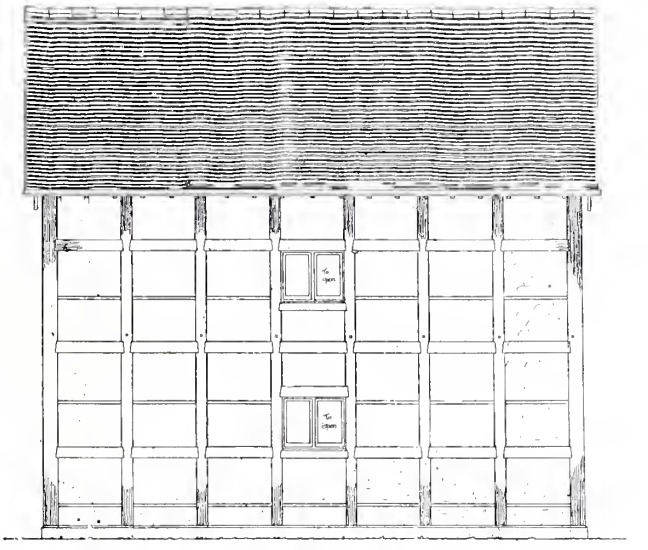



Class III. of the competition.

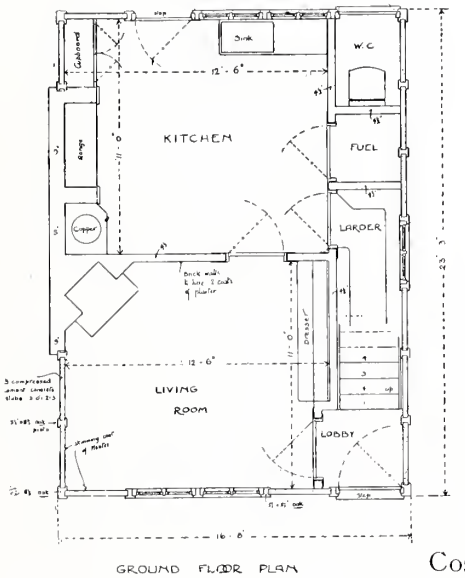
Cost, £188 15*s.* 0*d.* each; 5¼*d.* per foot cube. Rentals, 5*s.* 6*d.* per week inclusive.



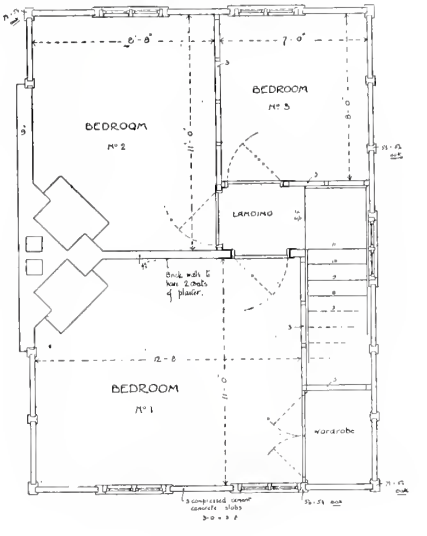
FRONT ELEVATION



SIDE ELEVATION




GROUND FLOOR PLAN




FIRST FLOOR PLAN

Cost per foot cube, 5*d*.

## A DETACHED COTTAGE, PLOT 480, FOR MESSRS. W. GRADWELL & CO., LTD.

A design by Mr. W. Moss Settle, A.R.I.B.A., of Barrow-in-Furness, registered in conjunction with Mr. Alderman Gradwell, Managing Director of Messrs. W. Gradwell & Co., Limited, Contractors, Barrow-in-Furness, of a cottage to cost not more than £150 (not including builder's profit) when built as a single cottage, and about £280 when built as a pair, making the cost per foot cube 5*d*.

It is to be erected as a permanent structure, and is two stories in height, containing, on the ground floor, a vestibule or entrance lobby, living room with firegrate and large dresser (12 ft. 6 in. by 11 ft. by 8 ft. 3 in.), kitchen scullery with cooking range, wash-boiler and slop stone (12 ft. 6 in. by 11 ft. by 8 ft. 3 in.), larder and fuel store, with w.c., having outside entrance and ventilation. On the first floor, reached by staircase from lobby, there are three bedrooms (12 ft. 8 in. by 11 ft. by 8 ft. 6 in., 11 ft. by 8 ft. 8 in. by 8 ft. 6 in., 8 ft. by 7 ft. by 8 ft. 6 in.), two of which are provided with firegrates and one having large wardrobe.

The cottage is built on a solid layer or bed of concrete covering the whole site. The main walls are formed of solid oak posts, placed 2 ft. 9 in. apart and grooved for 3 in. compressed cement concrete slabs, having lipped horizontal joints, the inside being plastered over, as also the 4½ in. brick internal walls. The casement windows and door-frames are fitted into the oak framing, with oak heads and sills. The roof is covered with reddish brown tiles. The exterior forms a series of panels between the oak framing, which is darkened, the panels being treated with "Hall's Distemper" (white). This cottage is to be erected for exhibition in Class I., *i.e.*, for the best £150 cottage.

M.H. A A

# COTTAGES DESIGNED BY MR. H. CAYLEY, A.R.I.B.A., ARCHITECT, ROTHWELL.

## Single Cottage.

This cottage is intended to be entered for Class I. It contains a living-kitchen, 12 ft. 6 in. by 11 ft. 6 in. by 7 ft. 6 in. high, scullery, pantry, w.c., coal-place, and three bedrooms.

The living-kitchen has a "Municipal" combined heating and cooking stove, and a square bay window. The scullery has a copper and sink, and is intended to have a gas cooking range (though this is not included in the price given). The space under the stairs is open to the coal-place. The bedrooms are formed partly in the roof: the largest one contains 1,000 cubic feet; this and another bedroom have fireplaces, the third having special air inlet and outlet. Care has been taken to secure that the window of each bedroom is nearly up to the ceiling. The walls are of local gault bricks with a rough-cast face, and the chimney is whitewashed on the bricks. The roof is covered with hand-made sand-faced Bedfordshire red roofing tiles.

The only point in the planning to which attention is particularly directed is the care taken to secure that no space is wasted in connection with the staircase; the three bedrooms are entered from a landing 3 ft. square.

The aspect of the living-kitchen is north-west, with a pleasant prospect; windows are also obtained in the south-west elevation.

It may be worth while to point out that the house as built contravenes no ordinary by-laws, though some local authorities, apparently without any legal justification, object to first floor bedrooms being formed partly in the roof.

The cost is about £160 including builder's profit, but not including fencing or paths; and may be taken at £145 without builder's profit.

## Pair of Cottages.

This pair of cottages is intended to be entered for Class 4 (as a pair of five-roomed cottages not exceeding £35 per room in cost). Each cottage contains a living-kitchen, 14 ft. by 13 ft. by 8 ft. high, scullery, pantry, w.c., coal-place and three bedrooms.

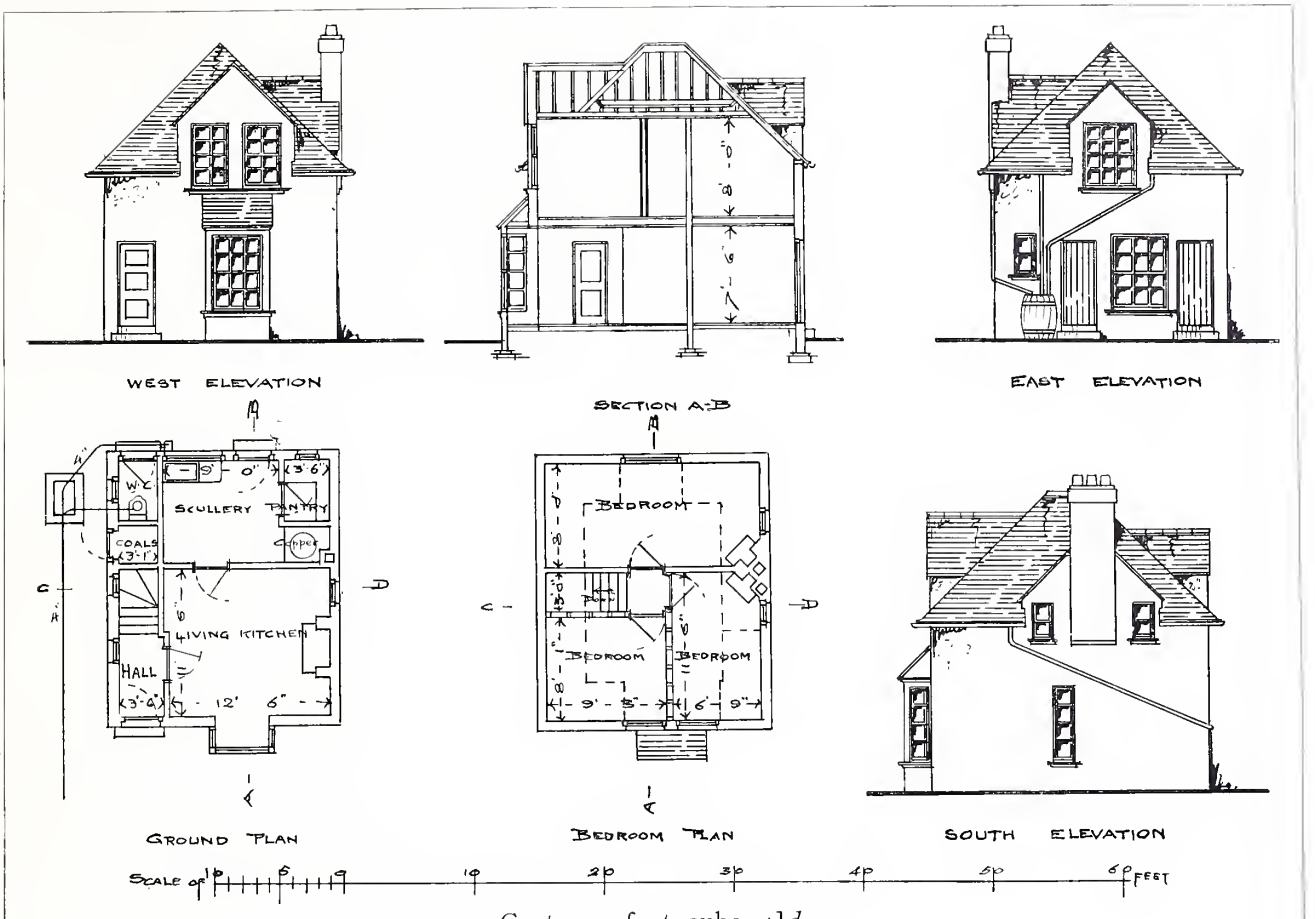
The living-kitchens have "Municipal" combined heating and cooking ranges and semi-octagonal bays. The sculleries have coppers, sinks and baths, and are intended to have gas cooking ranges (though these are not included in the prices given). The spaces under the stairs are open to the coal-places. The bedrooms are formed partly in the roof; the largest one in each cottage—over the scullery, etc.—is 17 ft. 10 in. by 8 ft.: and all have fireplaces. Care has been taken to secure that one window in each bedroom is nearly up to the ceiling.

The walls are, up to first-floor level, faced with red bricks from Plowman & Sons, Shefford, and above are of gault bricks with a rough-cast face. The roof is covered with hand-made sand-faced Bedfordshire red roofing tiles. The eaves have been given an effective projection, and the rough-cast face is, at its foot, carved outwards with wood brackets beneath, while the bays have a cornice with similar brackets in the same horizontal line.

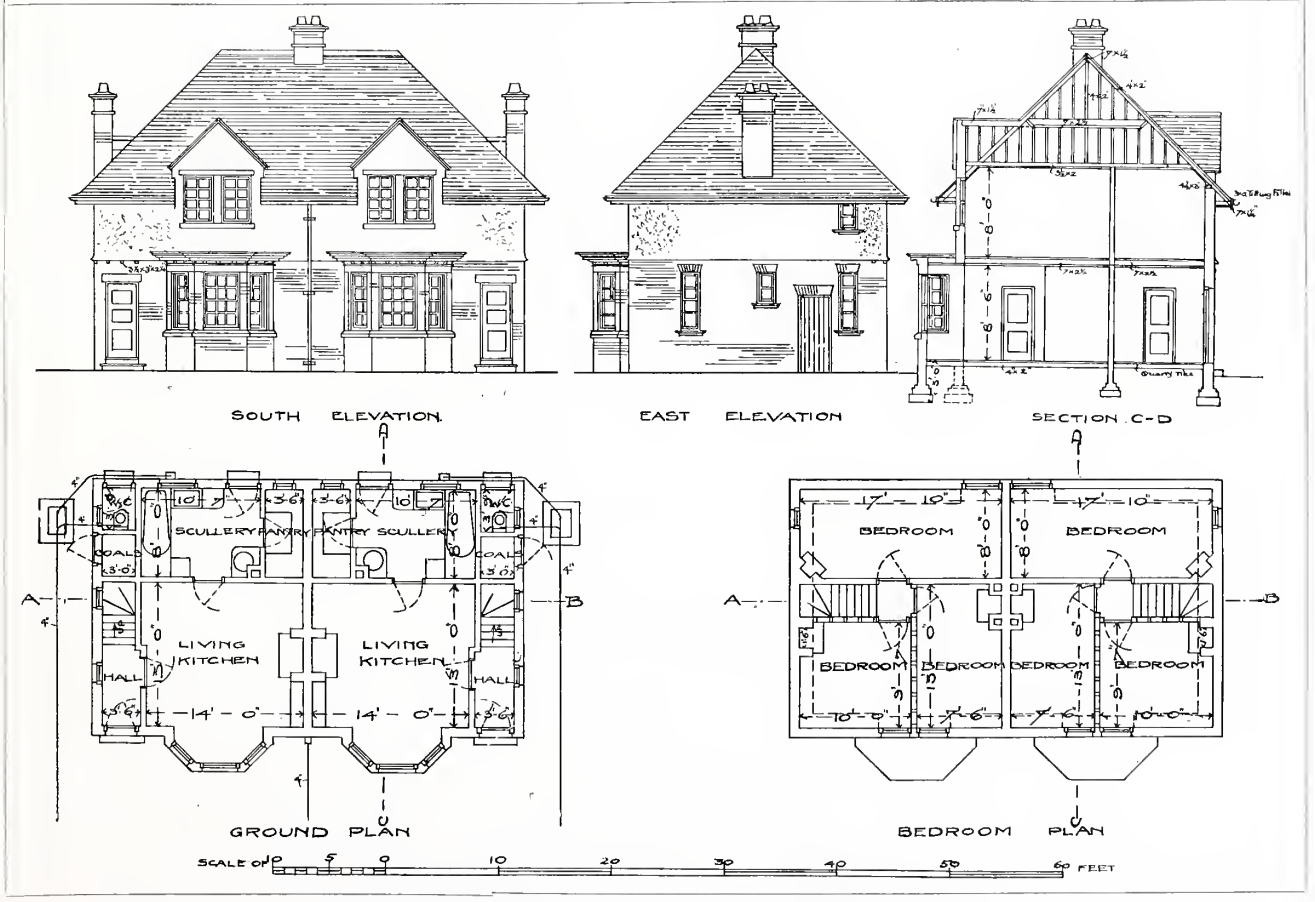
By arranging that the three bedrooms are entered from a landing 3 ft. square, no space is wasted in connection with the staircase.

The aspect of the living-kitchens is south.

The cost of the pair is about £355 including builder's profit, but not including fencing or paths; and may be taken at about £320 without builder's profit.




Cost per foot cube, $4\frac{1}{2}d.$




[*H. Cayley, Architect, Bank Chambers, Rothwell, Kettering.*

Cost per foot cube, $4d.$

## COTTAGE CONSTRUCTED BY MR. JOHN McMANUS ON PLOT 566.

Class I., for cottage at £150. This includes foundations of cement concrete with dwarf brick walls to floor line.

The walls consist of timber with matched and beaded boarding for inside lining, and weather boarded dado on outside, with compressed fibro-cement panels above, and timber overlays which admit of artistic treatment. The roof is of timber covered with tiles, or galvanised corrugated iron. The ceilings are lined with matchboarding.

The cottage, as the plan shows, is fitted with cooking range for living room, iron mantel register stove for best bedroom, portable boiler for scullery; cupboards are provided for two bedrooms, also for living room, and a good sized pantry, coalshed, and e.c.

For purposes of permanent occupation in the Garden City, the drainage will be connected to main sewer, and the water supply from main. It is claimed as an advantage that all rooms are on ground floor, and that they are constructed separate and distinct.

The cottage is specially designed for country places and is detached, and can be erected within four weeks complete.

Accommodation: Living room with range, 10 ft. 6 in. by 11 ft. 6 in. by 9 ft. 3 in.; bedroom with register stove and iron mantel, 9 ft. 6 in. by 11 ft. 6 in. by 9 ft. 3 in.; two bedrooms, 11 ft. 6 in. by 8 ft. 6 in. by 9 ft. 3 in.; scullery with boiler and sink, 6 ft. by 7 ft. by 8 ft.; pantry, three cupboards, shed for coals, and e.c. or w.c.

The cost per foot cube is estimated at 4½*d*. inclusive of all constructional works, also water supply, but not drainage.

## BUNGALOW COTTAGE CONSTRUCTED BY MESSRS. T. J. HAWKINS & CO.

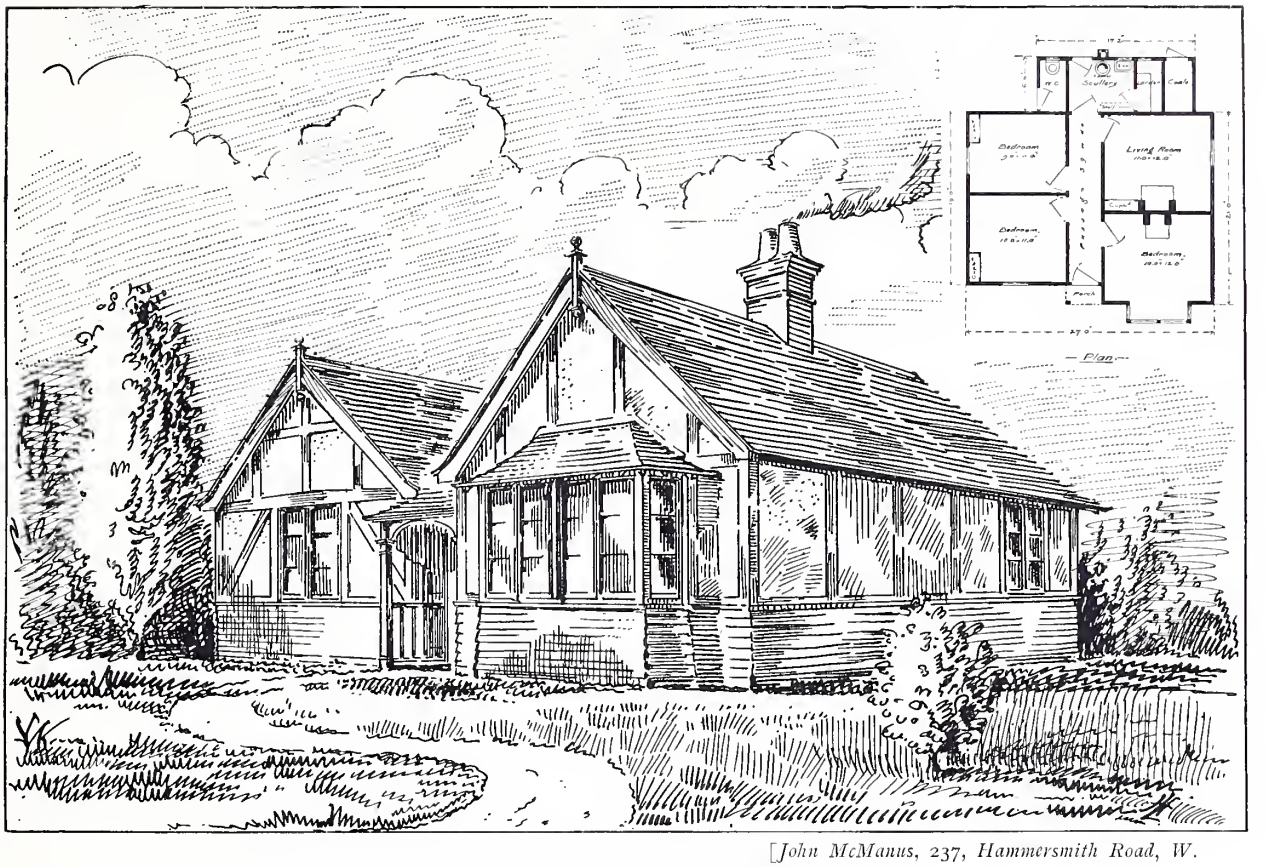
Messrs. T. J. Hawkins & Co. claim to have formulated a new idea, which is altogether different to the ordinary wood and iron buildings, which are not now considered as cheap as they appear, owing to various causes. Some people also take exception to them because of their combustible nature. These two objections Messrs. Hawkins claim to have overcome, and, although fire-resisting materials are now used for both internal linings and floor, the cost is kept at a reasonable figure. The extra expense is not more than 15 per cent. beyond what is paid for the ordinary wood and iron structures. In addition, it is necessary for the buildings to be of a portable nature, and, as all bungalows and other buildings are constructed in sections, they can be taken down and re-erected elsewhere at a very nominal cost.

From the section wooden joists and flooring are omitted, and a fireproof flooring substituted. This flooring (known as "Stonwod") is laid in a somewhat similar manner to concrete, and, therefore, has no joints or cracks whatever, whilst it is as silent and as warm as wood floors, and much more sanitary than any yet introduced.

With regard to the interior lining, the matchboarding usually supplied is discarded, and there is now used a fire-resisting lining, composed mainly of asbestos, which is nailed on to the framing. This material can be either painted or papered.

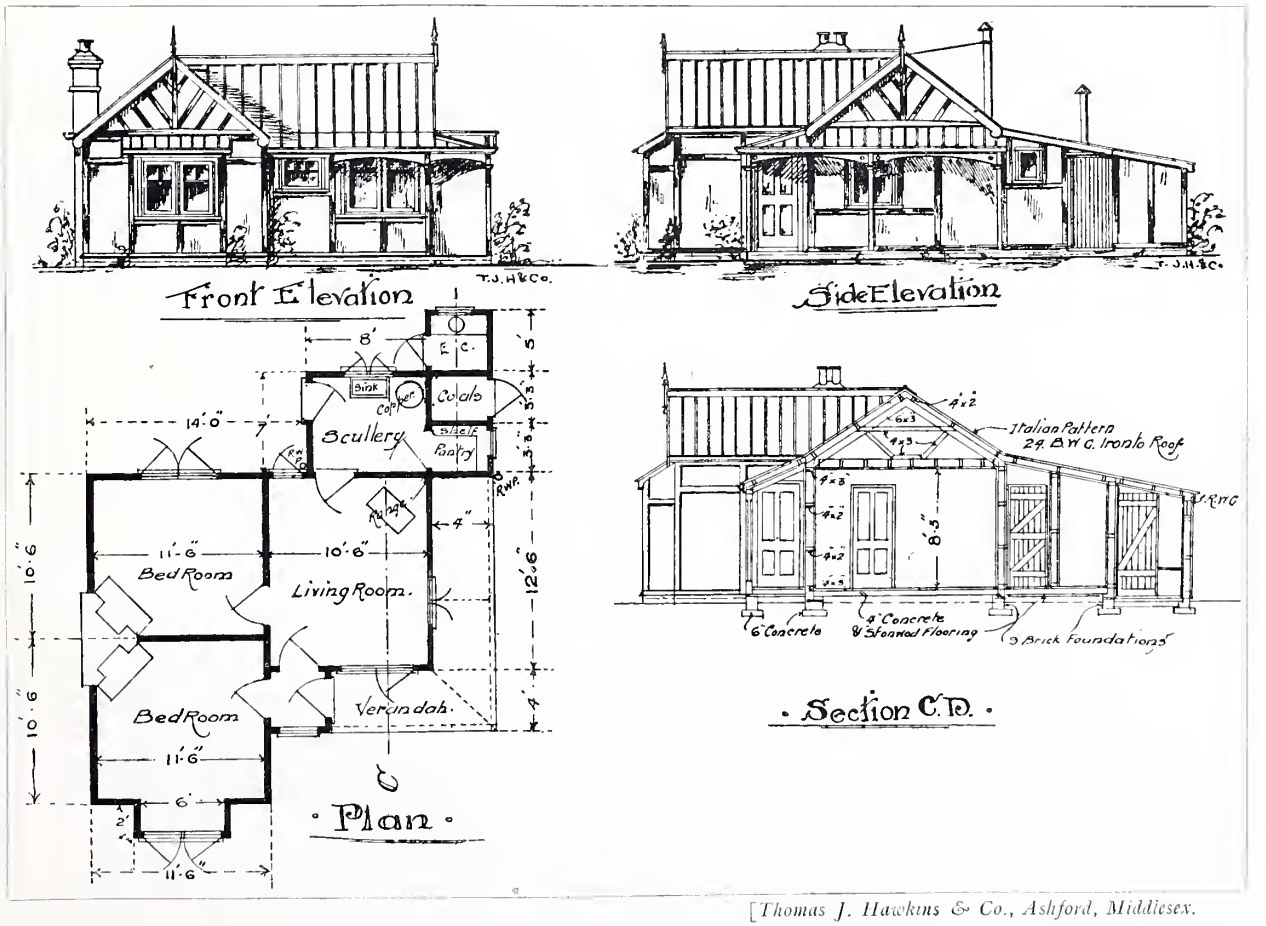
As it was believed that the inflammable wood flooring and matching were the chief causes of the opposition by district councils and the Local Government Board, the constructors wrote asking district councils throughout England and Wales whether they would support their proposal for cheap fireproof dwellings, and whether they would amend their by-laws accordingly. Not only were the majority of the councils in sympathy with the object, but the Local Government Board, after being petitioned by the Staines Rural District Council (who were the first Council to take practical steps in the movement), have sanctioned the erection of such buildings. The price of the bungalow of the smaller type exhibited at Letchworth, carried out on the foregoing principle, is only £125, and it is possible, without altering the elevation, to add rooms, say 12 ft. 6 in. by 10 ft. 6 in., at a cost of only £21 extra.

The bungalow at the Garden City is very suitable for those requiring week-end residences in the country, or for gentlemen requiring lodges, and other superior dwellings for their estate.




[*John McManus, 237, Hammersmith Road, W.*

Cost per foot cube, $4\frac{1}{2}d.$




[*Thomas J. Hawkins & Co., Ashford, Middlesex.*

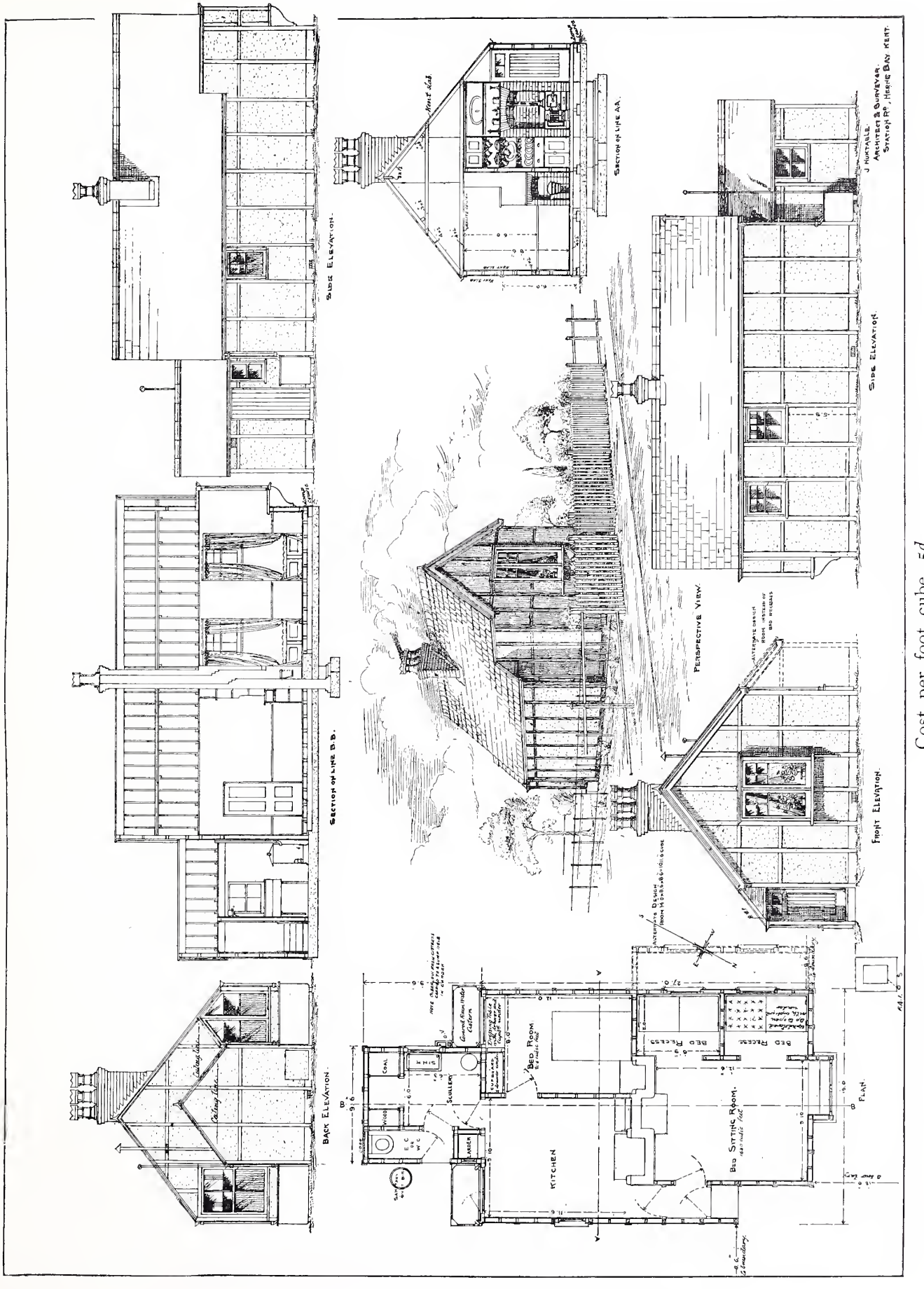
Cost per foot cube, $4\frac{1}{2}d.$

## DETACHED COTTAGE DESIGNED BY MR. J. HUXTABLE FOR THE BRITISH URALITE COMPANY.

The following is claimed by Mr. J. Huxtable, architect, surveyor and land agent :—

Building framed in 4 in. by 4 in. timber. Ceilings in 6 ft. by 3 ft. Uralite sheets, painted two coats, in white vernolene or papered. Outside walls—Kent slabs 6 ft. by 3 ft., joints covered with strips of Uralite or Kent slab 3 in. wide, painted two coats of vernolene, No. 48a colour, and strips No. 56 colour. The inside walls in similar strips, horizontal joint covered with wooden dado rail, upright joints rubbed down and stopped before decoration with two coats of vernolene of colour to suit. Fireplaces—jambs, etc., salt-glazed brick, being clean and durable. Roofs—Kent slabs. Some advantages are :—

(1) Practically fire-proof; (2) practically damp-proof; (3) designed to meet most councils' by-laws; (4) could stand on a plot of ground of 20 ft. frontage only, if lighted from the roof for one bed recess; (5) very little furniture required beyond permanent fitments; (6) can be shut up without suffering from damp or leaky roofs to the same extent as a brick and plaster or wood-lined building; (7) very little pointing to brickwork, cost little to keep in repair; (8) Uralite does not perish; (9) the decoration is sanitary, simple and effective, and costs little to renovate or renew, and can be done by unskilled labour; (10) another room in lieu of bed recesses can be added at little cost; (11) being damp-proof, requires less firing, a saving of coal; (12) better health for the occupants; (13) specially suited for damp situations or hot climates; (14) contains the greatest amount of comfort for the least possible cost and very little expense to maintain, whether occupied or not; (15) can be built, decorated and occupied within three weeks without risk of damp or ill effect on the decorations.




Cost per foot cube, 5*d*.

## COTTAGE ERECTED BY MESSRS. WELLS AND PRATT, BUILDERS.

The desire of the builders is to provide a small cottage for a working-man. The plan is compact, and has a parlour and kitchen. Two of the three bedrooms have fireplaces, and all rooms have separate entrances for the sake of privacy. The building is constructed of brick, and all unnecessary brickwork on ornamental gables, etc., has been avoided. The walls are rough-cast; the chimneys, being more exposed, are struck-jointed. The interior walls are plastered with Granite Silicon Plaster. The cottage is entered for Class 1 of the competition, cost not to exceed £150, and it is estimated that the cost will not exceed £142, excluding builder's profit.

## CUBITT'S RE-INFORCED CONCRETE COTTAGE, DESIGNED BY MESSRS. HESKETH AND STOKES, ARCHITECTS.

This cottage is being erected by Messrs. Cubitt & Co., of 258, Gray's Inn Road, under Class 4. The estimated cost is £200.

The cottage consists of kitchen, with range, area 154 ft. sup.; parlour, with stove, area 115 ft. sup.; scullery, with copper and sink, area 77 ft. sup.; bedroom, with stove, area 115 ft. sup.; two bedrooms, area 77 ft. sup. each; central hall, 50 ft. sup.; coals, larder, etc., etc.; average height of rooms 9 ft. 6 in.

In dealing with the economical construction of cottage, it was thought that the newly introduced material of "Re-inforced Concrete" had possibilities which had hitherto not been recognised. No provision has been made for its use in any by-laws, although in using it an effort is being made to show that the spirit of the by-laws can be well observed, and that a wholesome and cheerful house can be built at small expense.

Economical considerations required that as far as possible there should be a repetition of parts, and that the wall surfaces should be diminished to a minimum, consistent with sufficient area of rooms, to meet any recognised standard of healthy conditions.

These two considerations led to the following conclusions, viz.:—

(1) That the nearer a building approaches a circle, the larger is its contained area; and (2) a polygonal figure of 16 sides gives the required repetition of parts.

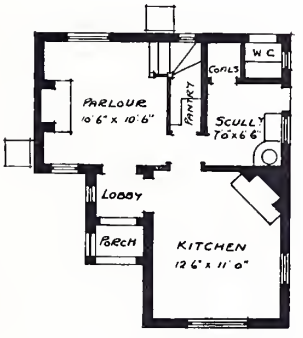
There were certain incidental advantages gained by the arrangement thus adumbrated. For example, all the living rooms, both in winter and summer, get direct sunlight into them. The upward slope of the roof from the walls gives an opportunity of ventilation towards the centre, where the chimneys are collected into one.

The inner hall gives convenient access to all the rooms in the cottage. The material used in the construction is both fire-resisting and almost indestructible: the doors and windows are the only portions requiring occasional repairs and painting, a very great consideration in this class of building, where repairs often amount to a large annual sum. The walls are formed of two 2 in. slabs of concrete, separated by an air space, which experiments have shown to be remarkably impervious to heat or cold. The roof is formed with concrete slabs covered with slates, and the floor end foundations consist of a bed of "Re-inforced Concrete," not less than 6 in. thick in any part, with wood floors to living rooms. The divisions between the rooms are formed of 2 in. concrete slabs. The stoves to parlour and large bedroom are intended to be warm air grates of special pattern, giving warm fresh air to the adjoining bedroom. The building has this great advantage, that, with the exception of the foundations, it can be sent down in sections ready for erection, and, it is claimed, can be put together in a shorter time than is possible for any other permanent structure.

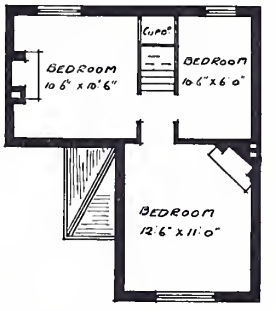
No certain estimate can be given of the cost, as the matter is still somewhat in an experimental stage.

FRONT ELEVATION

BACK ELEVATION

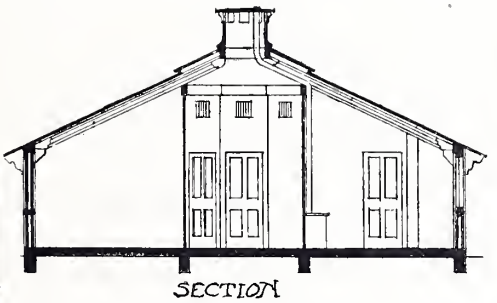



GROUND PLAN

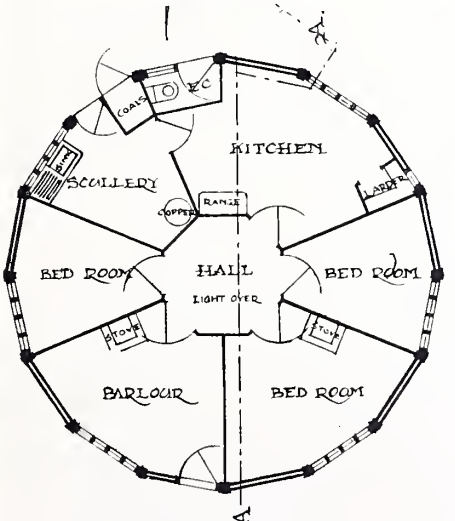



CHAMBER PLAN

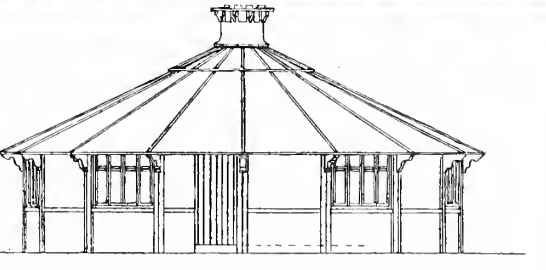
[*Wells & Pratt, Builders, 37, Old Park Road, Hitchin.*



SECTION




GROUND FLOOR PLAN



ELEVATION

HESKETH & STONES
ARCHITECTS
110 CHEAPSIDE E.C
JUNE 1905

## GROUP OF FOUR COTTAGES, DESIGNED BY MR. C. M. CRICKMER, ARCHITECT.

The requirements of the Class in which these cottages are entered are that one shall have four bedrooms, two with three bedrooms, and one with two bedrooms, all having a large living room, with another room at back having a bath convertible into a table for ordinary use, etc. Each of the larger bedrooms have over 1,040 cubic feet of space, and the three smallest not less than 540 cubic feet. All the bedrooms are on the first floor, and most of them have a fireplace.

The chimneys for all four cottages are brought into two stacks on the party walls, so that the foundations are reduced to the party and external walls only, the whole site being covered with 6 in. of concrete.

These cottages are built of red brick on the ground floor, and brick and rough-cast for the upper floors; the bedrooms have sash windows. The price for these cottages, as entered for the Cheap Cottage Exhibition, was £600 for the four, Mr. C. M. Crickmer, of 1, Lincoln's Inn Fields, W.C., being the architect.

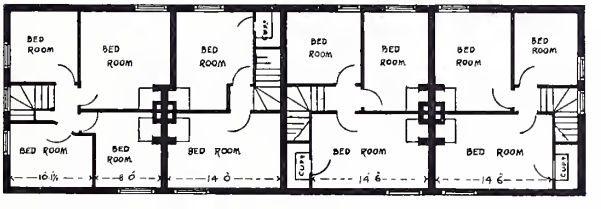
## COTTAGES DESIGNED BY MR. C. R. ASHBEE, M.A., ARCHITECT.

These cottages, being erected at Garden City, are designed as one solution towards the problem of building suitable cottages for the agricultural labourer for £150.

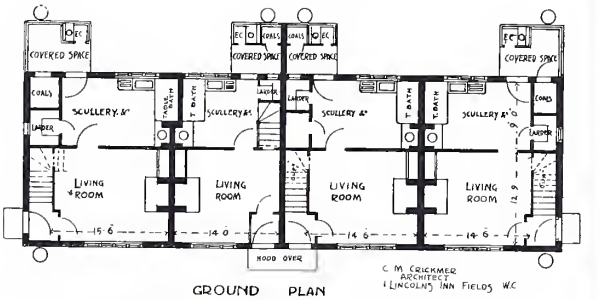
They are constructed with a brick plinth on concrete and brick party wall and chimney stack; the rest of the structure is of timber framing, the outside covered with matchboarding treated with carbolinum, the roof covered with red sand-faced tiles.

Externally the boarding is whitewashed, and the doors and windows painted a bright green.

The cubic contents of the pair is 13,000 ft., and the estimated cost £300, being 5½*d.* a foot cube, including well, paths, gates, hedges and outbuilding, with woodshed and w.c.'s. The architect is Mr. C. R. Ashbee, M.A., of 37, Cheyne Walk, Chelsea, and Chipping Campden.

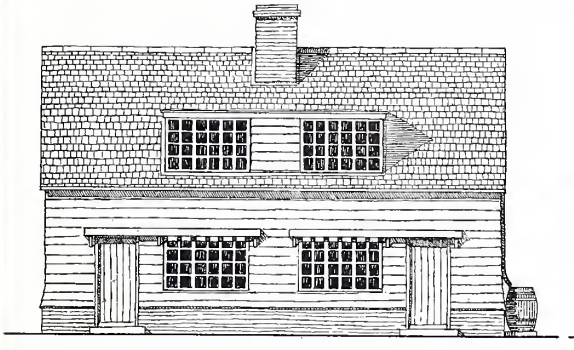



FIRST FLOOR PLAN

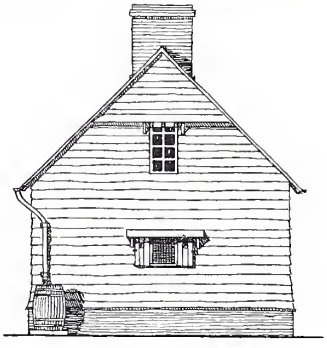



GROUND PLAN

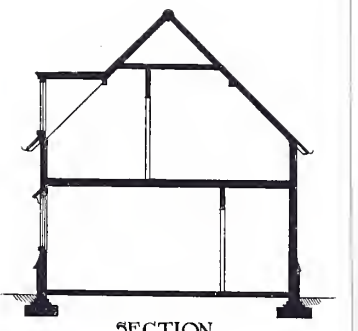
Cost per foot cube, slightly over 4*d*.



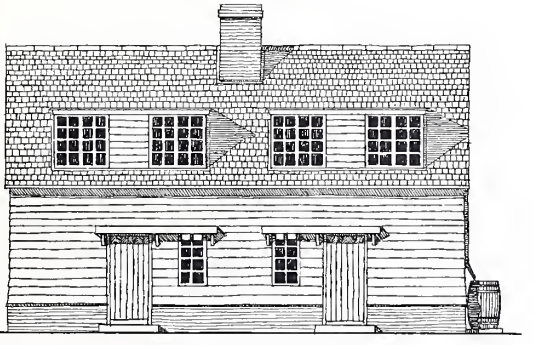
FRONT ELEVATION



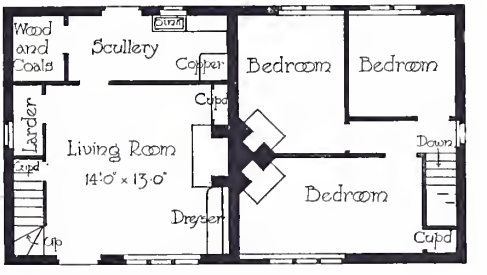
END ELEVATION



SECTION



BACK ELEVATION




GROUND PLAN BEDROOM PLAN

Cost per foot cube, 5*d*. to 5½*d*.

[*C. R. Ashbee, Architect, 37, Cheyne Walk, Chelsea, S.W.*

## COTTAGE DESIGNED BY MESSRS. SMITH AND BREWER, ARCHITECTS.

This cottage is entered for Class I. The estimated cost is £150.

The objects kept in view in designing the cottage, in addition to planning it so that it could be built for the stipulated £150 (in itself a difficult matter), have been as follows:—

(1) The provision of as much space as possible in the living room, while not allowing either the front door or the staircase to open upon it so as to render it draughty. A small bay window such as may be seen in the old cottages of the neighbourhood has been provided so as to add to the pleasantness of the room.

(2) The provision of a bath. This is placed in the scullery, and the hot water is supplied from a boiler in the kitchen range, so that a hot bath can be obtained whenever the kitchen fire is alight. The steam from the copper is carried off in a hood and pipe and thence to the outside.

(3) The placing of all the bedrooms upstairs, two of which are provided with good hanging cupboards. A cupboard is also provided on the ground floor in addition to larder, fuel, and store room.

(4) Keeping the e.c., fuel, etc., within the main block of the building in order to avoid the unsightliness of detached outbuildings, and so as to benefit from the extra amount of room on the first floor thus obtained.

(5) The exterior design is of the simplest character, built of materials most easily obtainable in the neighbourhood. The bedroom windows are placed in gables so as to avoid the expense of dormers. The width of the building is the same throughout, in order to simplify the construction by keeping all rafters, joists, etc., the same length.

No patent materials have been used, as, though many of them are excellent, they have proved to be, without exception, more expensive than the simple materials which have been employed. The house is constructed of 4 in. timber framing, covered with weather-boarding, resting on a 9 in. brick base and concrete foundation, with 6 in. bed of Portland cement concrete mixed in the proportion of one to eight, under all floors. The concrete in foundations is composed of one part of stone lime, six parts clean ballast and one part sand. The mortar is composed of one part of stone lime to three of sand.

The roof is covered with pantiles laid on yellow deal laths. The ridges are covered with half round ridge tiles. The ground floor joists are 4 in. by 2 in., the first floor 6 in. by $2\frac{1}{2}$ in. The roof scantlings are, ridge 7 in. by $1\frac{1}{2}$ in., rafters 4 in. by 2 in., collars 3 in. by 2 in., valleys 6 in. by 2 in. The floor boards are 1 in. yellow batten, straight joint flooring, with splayed headings.

There are no soil drains, but the wastes from bath and sink discharge over channel leading to gulley and from thence in 4 in. approved quality glazed earthenware socketed drain pipes jointed in cement, laid on 6 in. of cement concrete leading to cesspool, 50 ft. from house, 3 ft. diameter and 6 ft. deep, with 3 in. York stone cover. The drain is disconnected from cesspool with intercepting trap and fresh air inlet and a vent pipe carried up the side of house from just below the gulley.

The water is laid on from the Garden City Company's main.

## THATCHED COTTAGE, DESIGNED BY MR. DETMAR J. BLOW, ARCHITECT.

The cottage is made of English timber, and contains a living room, 12 ft. by 14 ft.; scullery, 11 ft. 3 in. by 7 ft., with sink, bath, copper, and pump; larder, 5 ft. 3 in. by 6 ft.; entrance lobby, 5 ft. 3 in. by 6 ft.; fuel shed, 7ft. by 10 ft., and earth closet, 4 ft. 6 in. by 3 ft. 3 in.

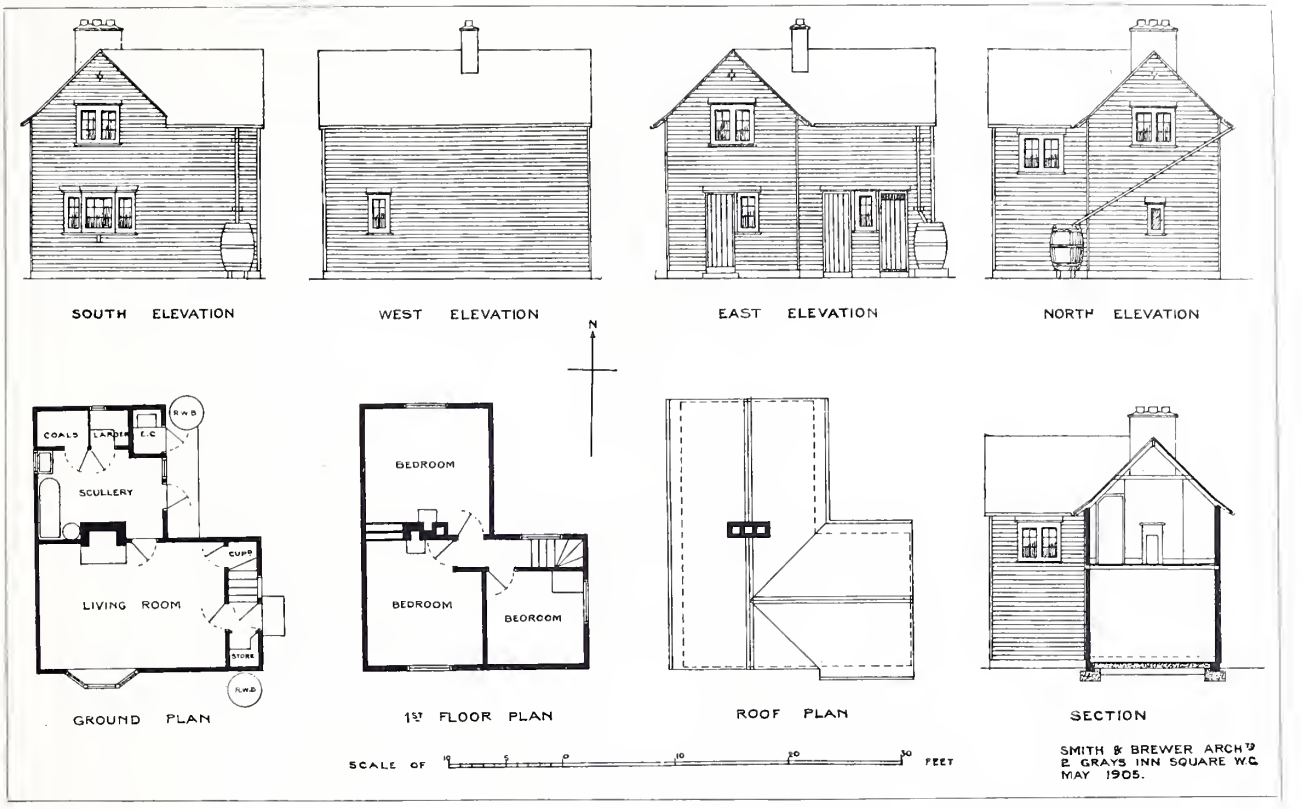
The range in the living room has a boiler attached, which provides hot water for the bath.

On the first floor there are three bedrooms, 12 ft. by 12 ft., 11 ft. 3 in. by 7 ft. 6 in., and 12 ft. by 7 ft. 6 in. respectively with a large cupboard.

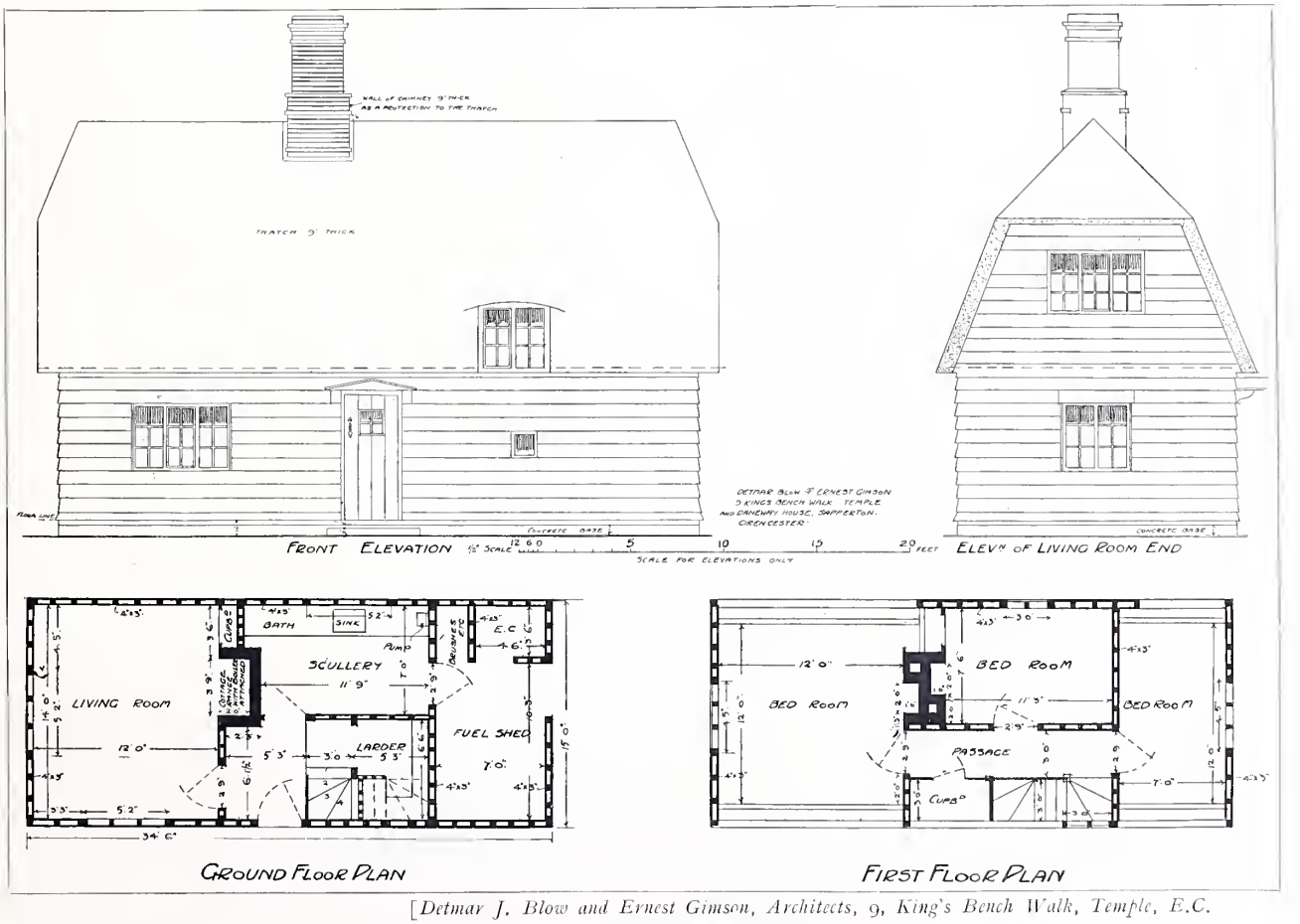
The whole is built of larch and oak, the roof is covered in tiles or thatch, the only piece of brickwork being the chimney.

The ground floor is made of concrete, and forms the base on which the wood structure is erected. The walls are lined inside with silicate cotton, which is a fireproof material and a non-conductor of heat and cold.

The total cube contents are 10,700 ft. The cost per foot cube is estimated at $3\frac{1}{3}d.$, taking the total cost at £150.

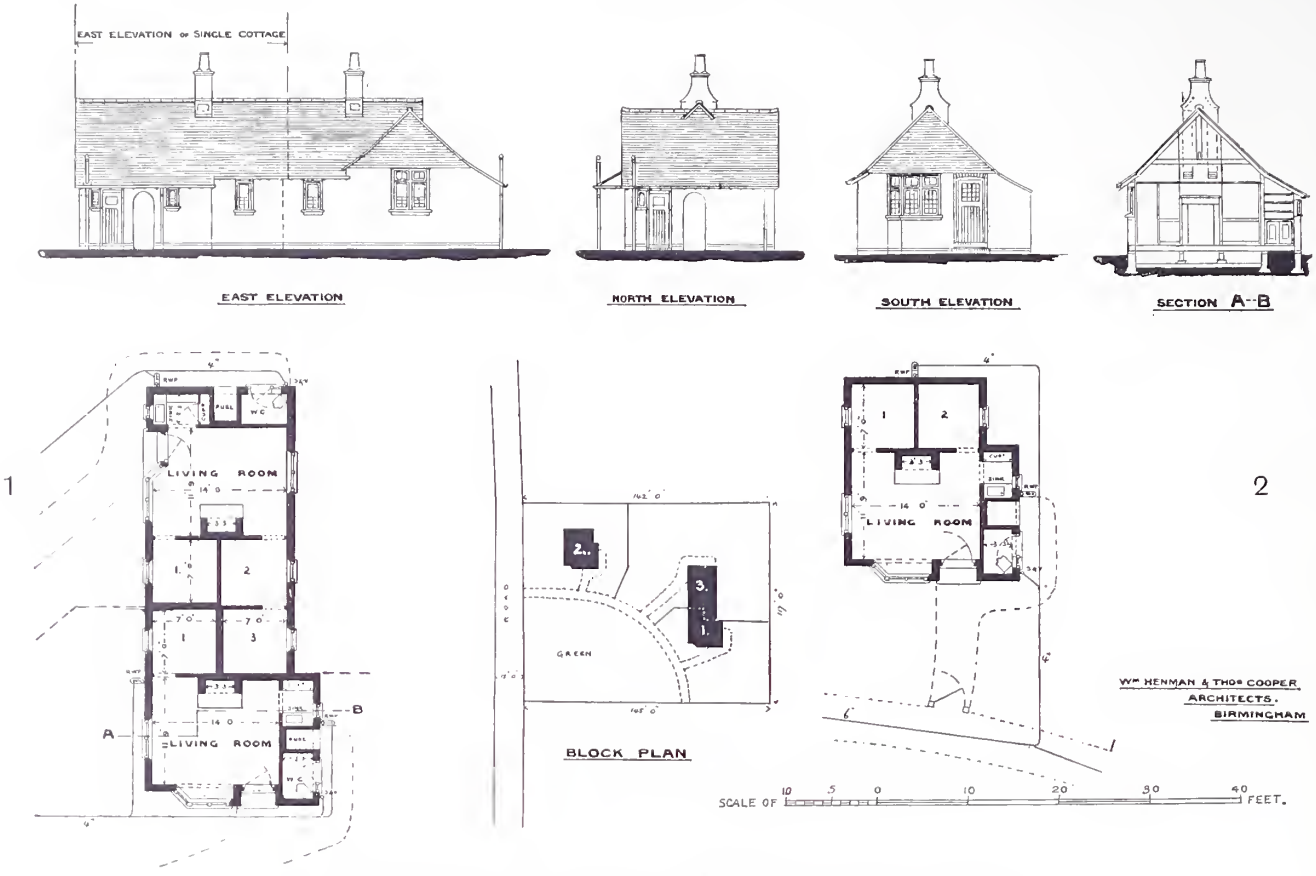



Cost per foot cube, $5\frac{1}{6}d.$




[*Detmar J. Blow and Ernest Gimson, Architects, 9, King's Bench Walk, Temple, E.C.*

Cost per foot cube, $3\frac{1}{3}d.$




1. Cottages with one and three Bed Recesses respectively.
2. Cottages with two Bed Recesses.

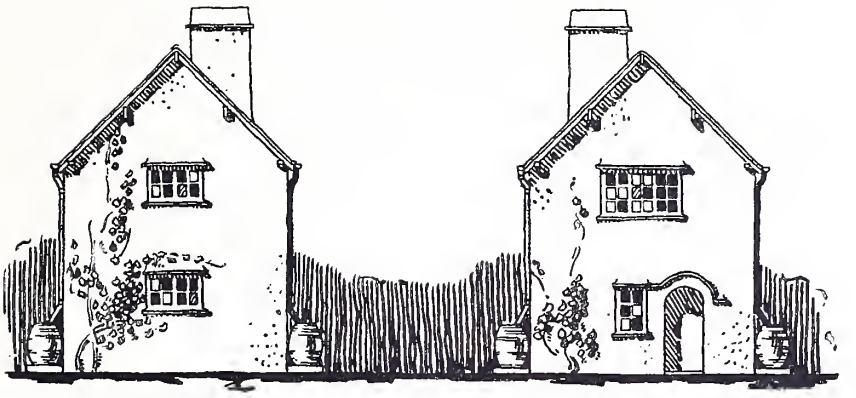
## SINGLE-ROOM COTTAGES BY MESSRS. HENMAN AND COOPER, ARCHITECTS.

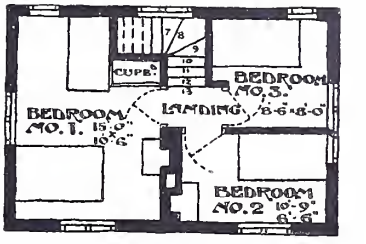
The three Exhibition cottages illustrated are to be erected at Letchworth as a type of dwelling suitable for those who cannot afford more extensive homes, for those, in fact, who otherwise would probably be occupying a single room, sharing in common with others inadequate sanitary and domestic conveniences, the object aimed at being to show the possibility of providing what are practically single-room dwellings, replete with all necessary conveniences for small families, giving respectively one, two, and three bed recesses.

In January of 1876 Mr. William Henman read a paper before the Cleveland Institute of Engineers, entitled "The Economic Construction of Dwellings for the Working Classes," illustrated by a number of plans of small houses and tenements, including a plan he had devised foreshadowing the arrangement worked out in the cottages now under consideration.

For the class intended to be provided for, the ordinary three and four-roomed houses are extravagant, many are ill-arranged, badly built, and do not meet the real requirements of those who, for want of something more suitable to their needs, have to occupy them. They are extravagant, because, as a rule, they are larger than necessary and contain useless fittings and finishings, and their arrangement is such as to involve unnecessary labour to the housewife in keeping them clean and tidy, for what does a newly-married couple, an aged couple without children, a widow or a spinster want with three or four rooms? It is in the hope of improving the lot of poor families that these cottages have been designed. Each provides a fair-sized living room, with small cooking range, opening from which is a sink lobby and food cupboard, also one, two or three bed recesses, so arranged that the bed is in each case screened from view, although there are no unusual doors. Entered from the outside is a w.c. and fuel place. In addition to the windows and doors being placed so that good through ventilation can be secured to all parts, special air inlets are provided, so that, even with doors and windows closed, change of air may continuously take place throughout the several apartments.

Externally the treatment is appropriately simple in character, brick walls and tile roofing being employed; but stone, slates, or in fact any suitable building materials, may be used, and even the plans can be varied to suit different circumstances without necessarily departing from the principle of a self-contained single-room dwelling for country or town.

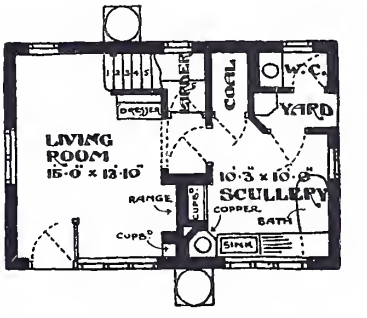



BEDROOM PLAN

CHEAP·COTTAGES·EXHIBITION
LETCHWORTH, GARDEN·CITY:
DETACHED·COTTAGE· BY

C·GUSTAVE·AGATE·ARCHI:
:TECT· 14·JOHN·DALTON :
STREET · · · MANCHESTER




GROUND PLAN

## COTTAGE DESIGNED BY MR. C. GUSTAVE AGATE, ARCHITECT.

The cottage is entered for Class 1 of the competition, and is a detached cottage. It is erected for permanent occupation of the site, on Plot No. 498, Town Area. The principal features of the plan are:—Compactness and workableness of the living room, scullery, and their attendant larder, coals, yard, and w.c., the cottage being self-contained, with no outbuildings. The cooking range and side boiler are placed in the living room. The copper, bath, and sink are in the scullery, and space is provided for a mangle.

The living room is a through room, and is lit on three sides. The stairs are open to the living room to obtain additional air-space. The room is irregular in shape, and should, by virtue of this fact, by the peep up the stairs, and its three aspects, prove a more pleasant room to live in than could be obtained with four square walls and perhaps one window. The large bedroom contains over 1,000 cubic feet of air-space. The two others contain over 500 each. Two bedrooms have fireplaces. Each of the small bedrooms has two windows, and the large bedroom three. The materials used are 9 in. outside walls, rough-casted, and 4½ in. internal walls, and the roof is covered with pantiles. The living room floor is laid with large red tiles on concrete, and the other rooms on ground floor have concrete with cement finish. The bedrooms have boarded floors.

The estimated net cost is £140.

The cost per foot cube is estimated at 3·8*d*., taking the *net* cost, which is £140 10s.; but taking the *actual* total cost it is 5*d*.

## A BUNGALOW FOR THE MACK PARTITION COMPANY. DESIGNED BY MR. V. DUNKERLEY, 8, FREDERICK'S PLACE, OLD JEWRY, LONDON, E.C.

PLOT 474. CLASSES 1 & 4.

This bungalow contains a living room, 16 ft. by 12 ft. 6 in.; scullery, 7 ft. 6 in. by 7 ft. 1 in.; and three bedrooms, 12 ft. by 9 ft. 4 in., 11 ft. by 9 ft. 4 in., and 11 ft. by 8 ft. respectively.

A feature is that the rooms do not communicate with one another, except in the case of kitchen and scullery, a small hall lighted from the roof giving access to the rooms; the doors of the three bedrooms are so arranged that a curtain can divide these rooms from the remainder of the house, thus securing a privacy seldom attained in a bungalow. Another point in the arrangement of the bedroom doors is that, when open, a perfect system of through ventilation is secured.

The door of the living room is so placed that the room is entirely free from draughts.

An "Ellkay" folding bath and lavatory, with hot water supply, is provided in each bedroom; the bath, when not in use, "folds" against the wall, and, having a curtain in front when not in use, the bath is out of sight. This bath is supplied with hot water from a portable fire-copper, which can also be used for laundry purposes.

The w.c. and coals are approached from a porch, thus avoiding publicity.

The bungalow will be entirely built of Mack partition slabs, 4 in. thick, no framing or quartering being required, and, when the whole of the outer walls are covered with rough-cast a permanent water-proof, fire-proof, sound-proof, and vermin-proof building will be secured. Buildings erected of this material have stood the test of time in this and other countries, and the life of a building constructed of Mack slabs is estimated to be as long as that of brick, and the cost of upkeep considerably less. To the under side of the ceiling joists are nailed split floorboards a $\frac{1}{2}$ in. wider than the joists, stained oak colour. On to these boards are laid Mack ceiling slabs, by which a ceiling, the plaster of which never falls down or cracks and having the appearance of old oak joists, is obtained.

The cost is £130, with profit = £26 per room; excluding builder's profit, £118 = £23 14s. per room.

## A COTTAGE FOR THE MACK PARTITION COMPANY.

PLOT 476. CLASSES 1 & 4.

The entrance door opens into a small hall, from which the living room and parlour are entered, and from which the staircase ascends to the first floor.

The living room is 15 ft. 10 in. by 14 ft. 2 in. plus the recess; is particularly free from draughts, excellently lighted, has a pleasant feature in the nature of an alcove having a small bay, and has a store-room under the stairs in addition to a store-cupboard 5 ft. 9 in. by 1 ft. 9 in. The parlour is of a useful size, being 11 ft. 9 in. by 11 ft., with an angle fireplace. The scullery, 11 ft. 9 in. by 7 ft. 6 in., entered from the living-room, contains a self-setting stove, dresser, portable copper and folding bath, the latter being fixed in a recess and out of sight when not in use; it is supplied with hot water from the copper. The w.c. and coals are approached from a porch, thus ensuring privacy.

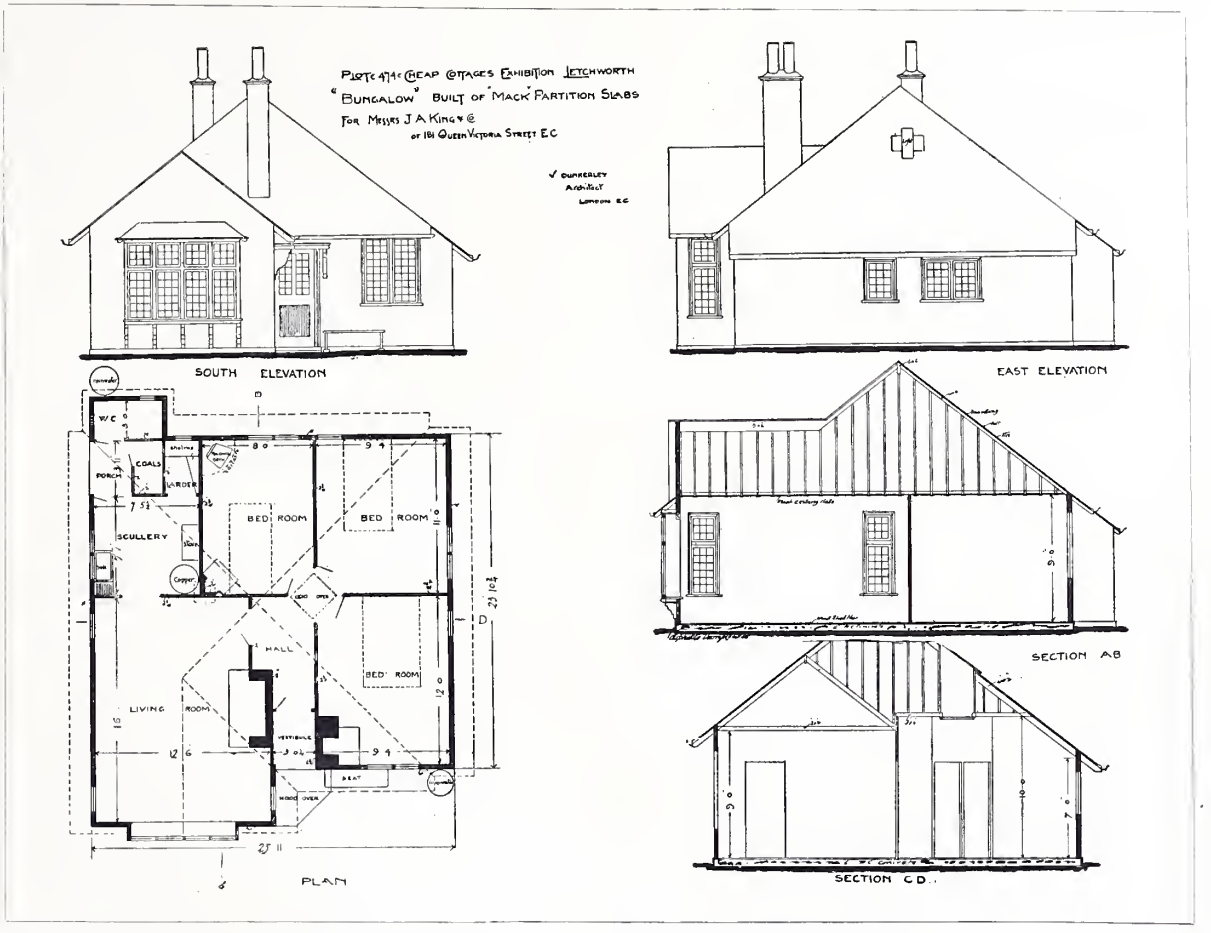
In addition to three excellent bedrooms, none of which have sloping ceilings, there is a store-room for boxes, linen, etc. The position and lighting of the staircase and landing must be considered vital to the health of the tenants, and particular care and thought have been expended on this part of the house.

With the exception of the fireplaces, which will be of brickwork, the whole of the walls will be of Mack partition slabs, the outer walls being 6 in. thick, and the inner partitions $2\frac{3}{4}$ in. and 2 in. respectively. The outer walls to the height of the first floor window sills will be of Mackolith, this being a material composed of Mack slabs faced with tiles, to represent brick-work, and, when pointed, it is extremely difficult to detect the difference; the tiles are keyed to the slabs in the process of making, and it is impossible to loosen or detach them.

The walls above the first floor window sills will be covered with white rough-cast.

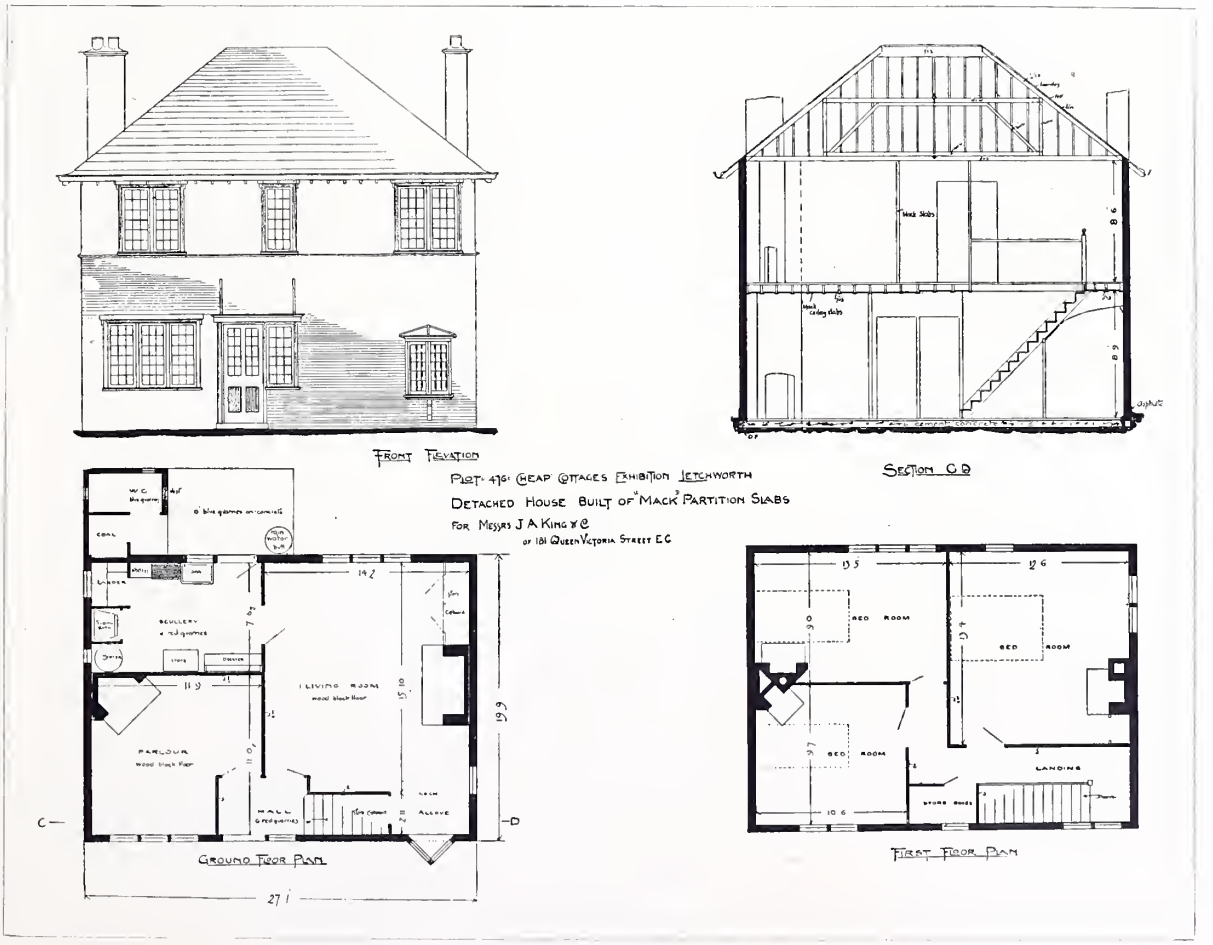
The Mack slabs are fire-proof, sound-proof, and vermin-proof, and when Mackolith is used, or the slabs covered with rough-cast, they are weather-proof.

The cost is £150, exclusive of builder's profit, and, if the latter is included the cost will be £165 = £25 and £27 10s. per room respectively.



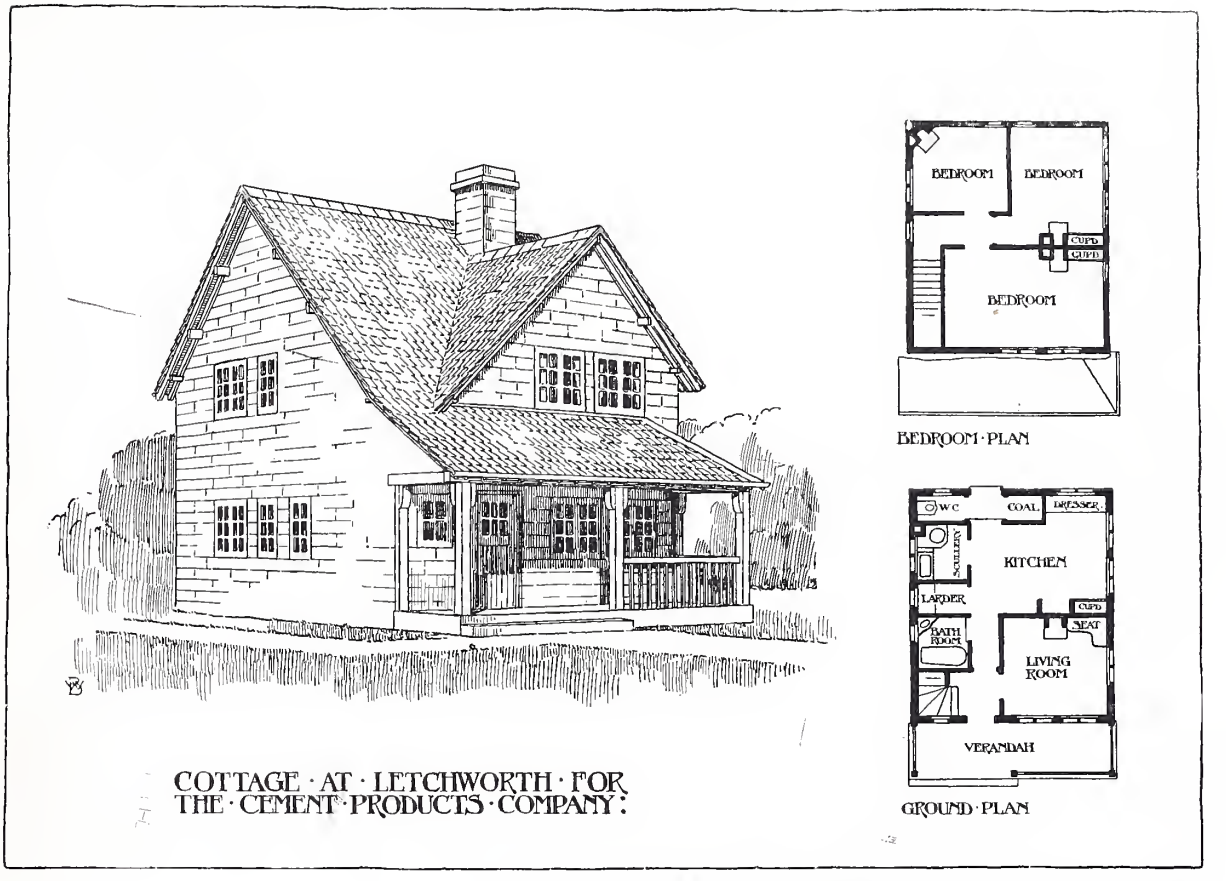

NOTE.—This cottage is fitted with the "Ellco" apparatus, and each bedroom has an "Ellkay" folding bath and lavatory.

Cost per foot cube, $3\frac{3}{4}d.$, including profit.




Cost per foot cube, $3\frac{1}{2}d.$, including profit.

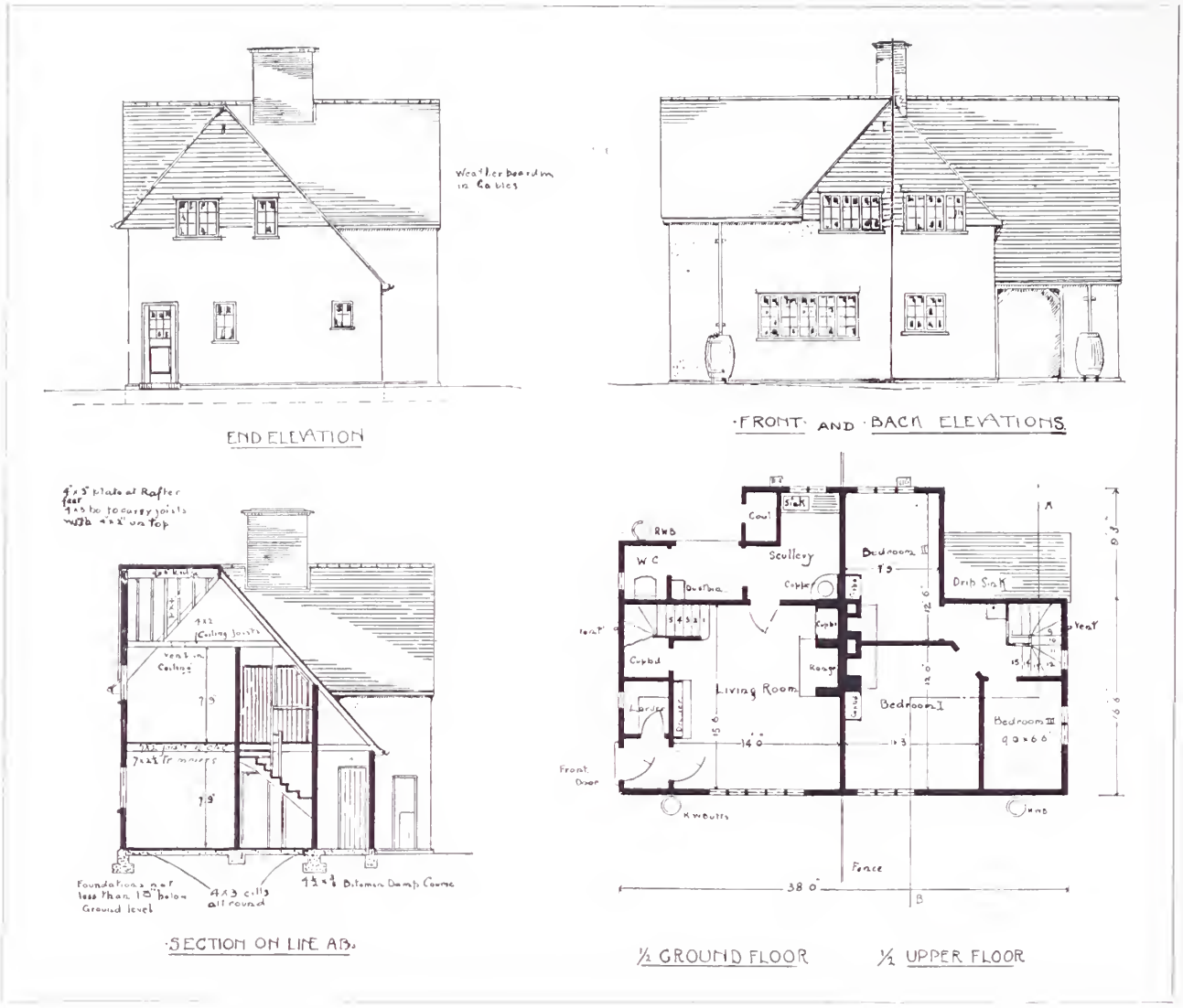
PERSPECTIVE OF COTTAGES ERECTED FOR THE MACK PARTITION COMPANY.




[*Robert Bennett, A.R.I.B.A., and Wilson Bidwell, Architects, Letchworth.*

## COTTAGE ERECTED FOR THE CEMENT PRODUCTS COMPANY.

The plans for the Cement Products Company's cottage were designed by Mr. R. Bowen, Surveyor, of Cheltenham, and the elevations and drawings were prepared by Robert Bennett, A.R.I.B.A., and Wilson Bidwell, Architects, of Letchworth, near Hitchin. The cottage, which is large and roomy, was designed to show what can be done for £150 by using concrete blocks instead of brickwork. The ground-floor walls are built of 10-in. hollow concrete blocks with 8-in. ditto concrete blocks above. All internal partitions are of 6-in. concrete blocks, the blocks being keyed together so as to make strong sanitary walls. A great saving is effected internally by simply going over the walls with a thin skimming coat, and practically saving all the plastering on walls. The roof is of red tiles brought low in front, to form a wide 6-ft. verandah. With this simplified construction it is the intention of the exhibitors to erect the cottage in one week.




# A PAIR OF COTTAGES ERECTED FOR THE NEW EXPANDED METAL COMPANY.

These cottages are entered for Class 2 of the Competition, for a pair of cottages, and it is estimated that their total cost will not exceed £300. The accommodation provided consists of one large living room, 14 ft. by 15 ft. 6 in., round which are grouped scullery, larder, and W.C., the latter having the advantage of being entered from a covered verandah. The entrance is placed at the side. Upstairs there is one large bedroom and two smaller, all entered from a landing at the head of the stairs. Into the construction patent materials enter very largely. All external and party walls are to be formed of 4-in. by 4-in. angle posts, with 4-in. by 2-in. intermediate studs, braced where necessary, and with 4-in. by 2-in. studs on each side of all windows. All structural timbers are to be coated with solignum. All wrought external and internal woodwork is to have one coat priming and three coats oils. All gutters and flashings are to be in ruberoid, also behind weatherboarding. All roofs are to be covered with Dawson's Asbeslate. The gables are to be weather-boarded. Messrs. J. Oldrid Scott & Son, 2, Dean's Yard, Westminster, are the architects.

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